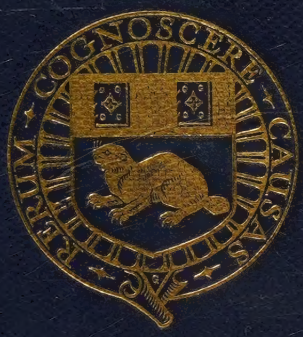

RERUM COGNOSCERE CAUSAS

WHEATON COLLEGE LIBRARY
Norton, Massachusetts

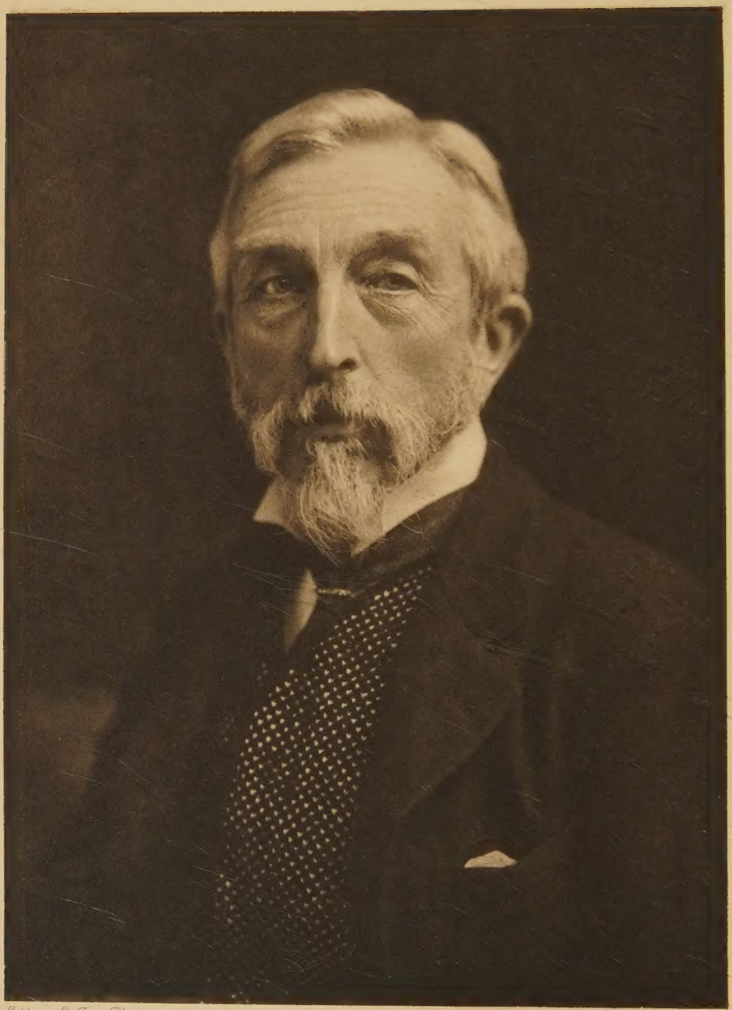
3:30 ~5:30

7 4:30

THE NEW SURVEY OF LONDON LIFE AND LABOUR

Digitized by the Internet Archive
in 2023

https://archive.org/details/newsurveyoflondo0000hlet



Elliott & Fry Photographers Emery Walker Ltd. phsc.

The Right Hon. Charles Booth
D.C.L. LL.D. F.R.S.
1840-1916

THE NEW SURVEY OF LONDON LIFE & LABOUR

VOLUME I
FORTY YEARS OF CHANGE

"Comparisons with the past are absolutely necessary to the comprehension of all that exists to-day; without them we cannot penetrate to the heart of things."
CHARLES BOOTH, *Life and Labour in London*, Final Volume, p. 31.

LONDON
P. S. KING & SON, LTD.
ORCHARD HOUSE, WESTMINSTER
1930

HN
378
.7
.6
v.1

29840

THE NEW SURVEY OF LONDON LIFE AND LABOUR

Director: Sir Hubert Llewellyn Smith, G.C.B.
Secretary: S. K. Ruck.
Assistant Secretary: L. C. Marsh.
Office: London School of Economics and Political Science, Houghton Street, Aldwych, London, W.C.2.

CONSULTATIVE COMMITTEE

Chairman: The Director of the Survey

Sir William Beveridge, K.C.B.
George M. Booth
Professor A. L. Bowley
Sir George Duckworth, C.B.
G. H. Gater, C.M.G.
John Hilton, C.B.
C. M. Lloyd
The Rt. Hon. Lord Passfield
Professor L. C. Robbins (*vice* the late Professor Allyn Young)

The New Survey of London Life and Labour was undertaken in 1928 by the London School of Economics and Political Science, which besides utilising for the purpose part of the income from an endowment given to the School by the Laura Spelman Rockefeller Foundation Memorial, has received direct gifts for the furtherance of the Survey from the City Parochial Charities Trustees, the Carnegie United Kingdom Trustees, the Noel Buxton Trustees, the Halley Stewart Trustees, and the Fishmongers', Drapers' and Clothworkers' Companies.

To these donors the Director and Consultative Committee desire to express their cordial thanks, as well as to the many public bodies and private individuals who have given the Survey the advantage of their co-operation and assistance.

They desire to record their obligations in particular to

the Ministry of Labour, the Ministry of Health (including the Registrar-General's Department), and the Home Office (including the Commissioner of Metropolitan Police) for continual help. Among Local Authorities they wish to express their special gratitude to the London County Council, which through its Officers of all branches and grades has placed its wealth of knowledge and experience unreservedly at their disposal. Thanks are also due to Borough Councils and their Officers throughout the Survey Area for assistance always readily given when sought.

The Board of Trade, H.M. Office of Works, the Board of Customs and Excise, the Meteorological Office, the Board of Control, the late Boards of Guardians, the Charity Organisation Society, the Brewers' Society, the Railway Clearing House, and the Underground Railways of London, Limited, have also given valuable help as regards particular matters. Especial thanks are due to the last named for their aid in preparing the transport maps.

The Director and Committee would also like to express their appreciation of the great assistance rendered by the Geographical and Statistical and other Departments of the London School of Economics and Political Science.

August, 1930.

CONTENTS

CHAP. PAGES

I. INTRODUCTION.

By Sir H. Llewellyn Smith.

Charles Booth's great inquiry (1886–1903). Circumstances which prompted it. Special conditions of the time. Changes since. Need of new survey as basis of comparisons with past and future. Enlarged area. Changed distribution of population and industries. Datum period and unit of comparison. Changes in purchasing power of money. Index of Cost of Living. Cost of prime necessaries, and of other objects of expenditure. Movements of wages and earnings ("money" and "real") and of hours of labour. Incidence of changes on different social grades. How far have the poor benefited? Has the sub-normal element of the population increased or decreased? Test of persons living below standard of family life, mental defectives, paupers, casual labourers, criminals. Changes of physical environment. Housing and overcrowding. Mobility and means of transport. Traffic dangers. Growth and importance of open spaces. Relation to transport. The "dis-amenity" of grime. Changes in health. Contribution of education to the improvement. Other cultural influences. Growth and use of public libraries. Amusements—the cinema. Conclusion. Limits of scope of present volume. What has been achieved and what remains to be accomplished 1–57

II. AREA AND POPULATION.

By Professor A. L. Bowley.

Area. Charles Booth's London. Its equivalent to-day. Area covered by the New Survey. Reasons for its choice. Population. Changes since 1891 in London as a whole and in each Borough—Centrifugal movement—Decreases in density—Sex and age distribution. Fall of birth and death rates. Birthplaces. Decline in

CHAP. PAGES

numbers of the country and foreign-born elements, and consequent increase in numbers of the London-born. Tables 58–83

III. COST OF LIVING.

By Sir H. Llewellyn Smith, assisted by L. C. Marsh.

Indices of cost of prime necessaries—food, fuel and light, rents, clothing. Combined "Cost of Living" index. The price of bread. Other objects of expenditure. Alcoholic drink and tobacco—consumption, cost and taxation. Travel by tram, omnibus and train. Newspapers. Amusements—influence of the cinema on cost. Trade Union Contributions. General conclusion as to the change in cost of other objects of expenditure. Influence of gratuitous amenities. Tables. Notes to Tables 84–110

IV. WAGES, HOURS OF LABOUR AND EARNINGS.

By Sir H. Llewellyn Smith, assisted by L. C. Marsh.

Methods of approach. Limitations of the data, and validity of conclusions to be drawn. Datum period. Index of hourly time rates of money wages. Women's wages. Index of hours of labour. Significance of their reduction in connection with the present survey. Index of weekly time-rates of money wages. Payment by results and its influence. Disproportionate rise in wage rates of unskilled labour. Index of "Real" wages. The movement of earnings. Difficulty and limits of ascertainment. The rise in "Real" earnings. What the figures show. Their relevance to the present survey. Tables. Chart. Notes to Tables . . . 111–42

V. HOUSE RENTS AND OVERCROWDING.

By Sir H. Llewellyn Smith, assisted by L. C. Marsh.

Importance of the housing problem. Working-class rentals. The sources of information. Movement of rents (including rates) in the County of London, 1880–1928. Local sample inquiry, 1880–1900. Effect of sub-letting on Index. Control and de-control of rents. Conclusion.

CHAP. PAGES

Overcrowding. The Registrar-General's and Charles Booth's bases. Their validity for long-period comparisons. Effect of the increased proportion of small tenements. The general index of overcrowding. Movements during the three decades 1891–1901, 1901–11, 1911–21. Localisation of overcrowding. The inner, middle and outer rings compared. Recent housing activity and policy. Tables. Notes to Tables . . . 143–70

VI. TRAVEL AND MOBILITY.

By G. Ponsonby and S. K. Ruck.

Early suburban development to the east and south owing to position of the main-line railway termini. Development north and west during period. The electric motor and underground travel. Growth, unification and extensions of Underground Railways. Tramways, unification, electrification and extensions. Omnibuses. Their later development as result of petrol engine. Consolidation of their management. Extensions. Improvements in frequency and comfort on all services. Changes in the cost of travel. Growth of travel and changing shares of train, tram and 'bus in the increased traffic. River steamers, private cars and cycles. Causes and effects of tendency towards segregation of residential from occupational areas. Social effects of increased travel. Conclusion—the interconnection of housing and traffic problems. Tables. Notes to Tables . 171–99

VII. HEALTH.

By Sir William Hamer.

The great reduction in the London death-rate. How effected. Influences at work prior to Charles Booth's time. 1841 the starting-point for comparisons. The four epochs of Health administration. Effect of changes in age-distribution of the population. Sanitation and the war against "filth" or zymotic diseases, 1841–89. Public Health measures since 1890. Housing, Midwifery, Old Age Pensions and National Health Insurance. Other measures. School Health Services and Maternity and Infant Welfare Centres. Cleansing Services. Co-operation of official and voluntary organisations. Different diseases and their share in the decline of the death-rate. Mortality tables and their interpretation. Epidemic, Endemic and Infectious,

CHAP. PAGES

Respiratory, Nervous, Digestive and other Diseases. Infant mortality. The great part played by education in effecting its reduction. Retrospect and Prospect. Tables. Charts. Notes to Tables . . . 200–44

VIII. EDUCATION.

By Sir H. Llewellyn Smith, assisted by M. I. Michaels.

The situation before Charles Booth's time. Effect of the Education Act of 1870. Bringing the children in to school. Problem of elementary school provision now solved. Growth of the educated adult population. Decline and virtual disappearance of the uneducated residue. Greater duration and regularity of attendance. Improved standard of education. Diminution in the size of school classes. Changed attitude to education due to parents being themselves educated. Diminished difficulty of enforcement. Schools for defectives. Continued education. Increased flow between elementary and advanced schools. Different kinds of continuation schools. Changed relations since 1890. Reduction of age transfer. Scholarships. The obstacle of poverty. Relation of secondary education to practical needs. Conclusion. Tables. Note to Tables. Chart 245–69

IX. PUBLIC AMENITIES AND MEANS OF RECREATION.

By Sir H. Llewellyn Smith, assisted by P. G. Nash.

The importance of amenities in city life. Parks and open spaces, their numbers, size, controlling authorities and local distribution. Growth in relation to population in the inner, middle and outer rings. Increase in the use made of open spaces, especially for sports and games. The shortage of playing fields. Need for further provision of open space in the outer areas. Possibilities and limitations in this direction. Public libraries. Their growth in number and activities. Differences between pre-war and post-war times. Theatres, music-halls and the cinema. Other means of recreation. "Dis-amenities"—traffic danger, noise and atmospheric pollution. The evil of grime. Tables 270–314

CHAP. PAGES

X. LONDON OCCUPATIONS AND INDUSTRIES.

By Professor A. L. Bowley.

Increase in the proportion of occupied persons. Local variations and their reasons. Proportions occupied by sexes and age-groups. Constitution of the "average family"—London and England and Wales compared. Changes in individual industries—direct comparison between 1891–1929 impossible. Three steps necessary —1891–1911; 1911–21; and 1923–29. Comparison of 1891 and 1911 by means of Census and Charles Booth's classification, with age distribution in the different occupations. Comparison of 1911 and 1921 by means of Census. Comparison of 1923 and 1929 by means of Insurance Statistics. Tables. Notes to Tables 315–40

XI. UNEMPLOYMENT AND ITS TREATMENT.

By Sir William Beveridge, assisted by L. C. Marsh.

Unemployment in the Booth Survey. Limitations of the statistics for purposes of comparison. London and provincial unemployment contrasted, 1890–1930. Three main periods—(1) 1890–1902, London better employed; (2) 1902–14, Provinces better employed; (3) post-war years, London better employed. Characteristics of periods. (1) 1890 to 1902—Unfixed responsibilities and sporadic action—London the pioneer in inauguration of Labour Bureaux. (2) 1902 to 1914 —Establishment of the Central (Unemployed) Body for London—Metropolitan, then national, organisation— Unemployment Insurance initiated. (3) Post-war period—London the largest unit in a national problem —Unemployment Insurance made general. Unemployment in London to-day—Industrial incidence— Local incidence. Attempted comparison of the magnitude of the problem to-day and at the time of the Booth Survey. Conclusion. Chart. Tables. Notes to Tables 341–60

XII. POOR LAW RELIEF.

By Sir Allan Powell and E. C. Blight.

Limited space devoted to the subject in the Booth Survey. Out-relief in London then regarded as of

CHAP. PAGES

minor and declining importance. Historical reasons for this attitude. Complete change of position following the War. Growth of institutional relief—its services made more acceptable. Changed administration of London Casual Wards. Growth of Out-relief as a result of war and post-war conditions. Its use in certain London Unions as a means of raising the standard of living. Scales of Relief. Ministry of Health restrictions from 1927 onwards and their effect. Changed attitude of public and beneficiaries towards the Poor Law, and the principle of "deterrence." Poor Relief now widely regarded as one of many forms of public social service. Its relation to other services and to private charity. Conclusion. Chart. Tables. Notes to Tables . 361–88

XIII. CRIME IN GREATER LONDON.

By Sir Edward Troup.

Danger of general impressions regarding the increase or decrease of crime in London. Need for statistical guidance. Nature of limitations of the figures used. Comparison of 1893 and 1928. Reasons for choosing this period. Crimes of violence. Crimes against property—differences between London and the country as a whole. Sexual crimes. Minor (non-indictable) offences. General conclusions as to the movement of crime in London. Influences affecting this movement. The War. Drunkenness and liquor control. Education. Improved economic position of the poorer population. Weakening of religious sanctions and parental authority. Changes in penal methods. Preventive agencies. Tables 389–403

APPENDICES 404–29

INDEX 431–8

ILLUSTRATIONS, MAPS AND CHARTS

PAGE

Portrait of the Right Hon. Charles Booth . . . *Frontispiece*

Maps showing Density of Population, 1891 and 1921 . 70–71

Chart illustrating Changes in London Wages (Real and Monetary) and Cost of Living, 1890–1928 139

Maps illustrating the Extensions of Travel Facilities in London, 1900–1930:

Main-line Railways . . . . . *facing page* 172

Underground Railways . . . . . „ „ 174

Tramways . . . . . „ „ 178

Omnibuses . . . . . „ „ 180

Charts showing the movement of the London Death-rate at various ages and from various causes, 1840–1927 . . . 235–9

Chart illustrating improvements in London Elementary Education, 1893–1929 269

Diagrams showing Changes of Age-distribution in the various industries, 1891–1911 332–3

Chart illustrating the course of Unemployment in London, 1893–1929 358

Chart showing the relations of Indoor and Outdoor Relief, 1875–1929 387

Sketch-map showing Survey Area . . . . *End of Volume*

CHAPTER I

INTRODUCTION

I

A GULF of forty years yawns between the period in which we live and that in which Charles Booth launched his great pioneer inquiry into London Life and Labour. That monumental inquiry made an epoch in the science and art of social investigation. It was projected, financed and directed by a private investigator, at a time when there were practically no comprehensive official statistics throwing light on the conditions of life of the London population. It was a time when the public conscience was becoming deeply stirred by the problem of "how the poor live." It was, as we have now come to realise, one of the critical periods in the economic and social history of the country.

The era of unquestioned predominance and of unbroken and rapid expansion of British trade had given place to a difficult period of transition, marked by long and often painful readjustments to meet the new conditions of commercial rivalry and economic nationalism with which British traders were everywhere faced in their former overseas markets. Though the real turning point had been in the "seventies" (following the Franco-German War and the growth of protectionism in Continental Europe), the recognition of a changed situation, that had come to stay, was not general until the following decade, when the gravity of social problems and the lack of provision to deal with them, which had been previously masked by the ever-growing volume of pro-

duction and employment, were brought home with startling distinctness to men's minds.

The widespread disillusion and depression, the searching for new solutions, and the questioning of conclusions hitherto regarded as fundamental, which characterised the "eighties," showed themselves in divers ways: in the unexampled number of official inquiries into social and economic conditions that were set on foot (e.g. the inquiries with regard to housing, sweating, depression of trade, and labour); in the formation of English socialist organisations and the beginnings of Socialism as a definite political creed in this country; in such movements for the closer study and better treatment of social problems, as that represented by the establishment of University Settlements in the poorer districts, and in all manner of popular outcries and impulses, from the "Bitter cry of outcast London" to Mansion House Funds for the unemployed.

Amid this babel of voices, questionings and counsels, Charles Booth launched his inquiry, determined to be satisfied with no superficial results, but to probe deeply into the problems of London poverty and well-being, with no other motive than to discover the truth. "My object," he wrote, "has been to attempt to show the numerical relation which poverty, misery and depravity bear to regular earnings and comparative comfort, and to describe the general conditions under which each class lives."

The first beginnings of the inquiry date from 1886, and in 1889 appeared the first volume, dealing solely with East London poverty, to which the original project had been limited. The most striking and original features of Charles Booth's investigation of poverty were the classification of the London population into an ascending series of social and economic grades described by letters (from A to H), the estimated enumeration of the population belonging to each of these grades, and the graphic representation of their distribution by streets by means of a set of coloured maps. As this classification was the

basis of the whole survey, and there will often be occasion to refer to it, a summary of Charles Booth's description of the various classes is given in Appendix I for purposes of reference.[1]

The reputation achieved by the first volume was immediate, widespread and fully justified. The questions to which the analysis of poverty and well-being offered answers were precisely those which were on everyone's lips. The inquiry was now extended in area to embrace all London, and gradually enlarged in scope; and for a series of years, successive instalments of the results continued to be published, until the last of seventeen volumes was completed just after the nineteenth century had come to an end.

More than a generation has passed since the completion of this great work, and though its authority stands as high as ever with those who really understand the methods of social investigation, the number who are familiar at first hand with the book itself has greatly dwindled. The volumes have long been out of print, and only accessible on the shelves of libraries. The lapse of time has brought so many changes, that the younger generation of inquirers can no longer find in these volumes a reflection of present-day conditions, nor is it always easy to obtain a clear-cut impression of the conditions prevailing at any single date, from a series of investigations continued over so long a period of years. Still less is it possible to draw inferences as to the direction of recent economic tendencies in London, from an inquiry which in the main was avowedly "static" in character. "My principal aim," wrote Charles Booth, towards the end of his inquiry, "is still confined to the description of things as they are. I have not undertaken to investigate how they came to be so, nor except incidentally to indicate whither they are tending, and only to a very limited extent or very occasionally has any comparison been made with the past."

While for these reasons the picture drawn by Charles

[1] See p. 404.

Booth is growing blurred with the passage of years, the author himself is becoming almost a legendary figure to many of the present generation. It has startled those connected with the present survey to discover how common is the misapprehension which confuses Charles Booth, shipowner, economist and Privy Councillor, with his great but wholly unrelated contemporary by whom the Salvation Army was founded.

There is no question that Charles Booth's work has already attained the position of a classic, which will always be of deep interest to students as a landmark in the history of social investigation. To those however who are not content that this should be its only future, but are convinced that, properly used, the pioneer survey has a great and enduring practical value, it has become increasingly evident that there is only one way to realise this value to the full, and to preserve and maintain the vital significance of the inquiry in relation to present and future conditions. This is to attempt a fresh survey, covering the old ground on substantially similar principles, subject of course to the modifications made necessary by changed conditions and the opening up of new sources of information. In this way Charles Booth's work may be made the starting point for comparisons which will measure the changes of social and economic conditions since his day, while at the same time laying a firm foundation for forward comparisons with the results of future surveys. Only thus can the results of his life-work be made a basis for answering the insistent questions which are in all men's minds. In what direction are we moving? Is poverty diminishing or increasing? Are the conditions of life and labour in London becoming better or worse?

Charles Booth always hoped that his own inquiry would some day be repeated before the memory of his methods had faded. For a long time however the means of organising and financing so great an undertaking were not forthcoming, and only now, after forty years, have the initiative of the London School of Econo-

mics, and the generous research grants of various public-spirited bodies made it possible to attempt the task.

A forty years' interval is a dangerously long one, and only the event can show if it be not too long. Most of those who worked on the original survey are dead, and it is often difficult to recover the precise methods and standards employed, by reference to the published text and the manuscript materials, which have fortunately been preserved. What the nature of the difficulties has been, and how far success has been attained in overcoming them, can be best explained and discussed when the results of the New Survey are published in later volumes. The present volume is only preliminary to the survey itself. Its purpose is primarily historical and retrospective, designed to bridge the long gap between the dates of the two inquiries by assembling and analysing such long-period data of a comparable kind as are available for the purpose of tracing the trend of economic and social conditions in London in the past forty years.

If the period in which Charles Booth's inquiry was projected was a critical turning point in the economic history of the country, the years to which the New Survey relates are certainly no less abnormal. Across every path of gradual progress the Great War of 1914–18 cut a deep gash which has not yet closed up. The reader of the present volume will again and again be confronted with the fact that the most fruitful comparison is not so much between now and forty years ago as between post-war and pre-war conditions—so much greater and more striking have sometimes been the sudden changes wrought in the conditions of London Life and Labour by the great catastrophe, than by the slighter and more gradual movements of the whole of the preceding generation.

We are living too near the events of the war and of the years immediately following it to be able to see the changes as a whole and in due perspective. We can however already see enough to be sure that there can be no mere reversion to pre-war conditions, but that

a new chapter has opened in our social and economic history, of which as yet it is difficult to forecast the contents. With prophecies of the future the present survey is not directly concerned, but it cannot but be worth while to pause on the threshold of a new epoch, to take stock of the existing conditions of life and labour, and of the nature and direction of recent changes and of present tendencies.

II

Charles Booth's Survey was limited to the County of London, which in 1891 contained rather less than $4\frac{1}{4}$ millions of inhabitants. He was of course aware that beyond the Lea, which is the eastern boundary of East London proper, there was growing up a further East London which already contained some hundreds of thousands of inhabitants, many of them living in poverty. But there is only a passing reference in the book to this "battalion in reserve" beyond the confines of East London.[1]

In the forty years which have since elapsed, the increase of population in London proper has been only a quarter of a million, and more than the whole of this relatively small increase took place in the first quarter of the period. From 1911 onwards there has been an actual decline, not great in amount, but a sure mark that the growth of the great aggregate of human beings, of which the County of London is now only the central core, has recently been taking place in the outer rings.

In point of fact the population of the eastern ring of outer boroughs has rather more than doubled since 1891, its total increase (440,000 persons) being nearly twice as great as that of the entire population of London proper.

In these circumstances it has been felt that to limit the New Survey to the exact area covered by Charles Booth would result in a seriously misleading picture, although in many ways such a limitation would have greatly simplified the task. On the other hand, it was impossible with the time and means available, even if on

[1] Series I, Vol. II, p. 32.

general grounds it had been thought desirable, to contemplate an extension of the survey to include the whole of the huge area of "Greater London"; an area six times as great as that of London proper, with a population approaching 8 millions, of whom nearly $3\frac{1}{2}$ millions live outside the County boundary. The actual limits of the area chosen for the New Survey and the reasons for their adoption are described in Chapter II, while the map at the end of the present volume shows the relation of this area to the County and to Greater London. The area so chosen is an arbitrary one, for there is no real geographical or economic boundary which can be defended as logical. The principle followed has been to add to the County of London the minimum fringe of outside urban boroughs necessary to produce an area which in its economic character is fairly comparable with the County of London in 1891, bearing in mind the fact that such area must for statistical reasons be an aggregate of boroughs and cannot be a circle of given radius.

The New Survey area covers about 106,000 acres, or not quite half as much again as the County, and has a population of 5,689,000, of whom about three-quarters dwell within and one-quarter without the County limits.

Though the population *residing* in the central part of this area has been declining of late years, the number *occupied* within the County has continued to increase, and a large number of the descendants of Charles Booth's Londoners are now living in the outer ring, and coming into London to work. As we proceed outwards however we gradually come into a different economic region, the inhabitants of which are more and more engaged in local industries and occupations, independent or nearly independent of London.

The statement that the New Survey applies to the area defined above requires a good deal of qualification. It is strictly true only of the street and sample house surveys, the main object of which is to ascertain the volume and distribution of poverty and well-being, and to classify

the population into economic categories on a basis comparable with the results of the former inquiry. For the purpose however of many special investigations it is impossible to adhere closely to this or to any single area. This is particularly true of the statistical data set out in the present volume, which are necessarily drawn from such existing figures as are ascertainable on a fairly comparable basis for a long period of years. We must in this matter be content to adopt in each case the area to which the available figures relate. In some cases (e.g. crime) it is necessary to extend our field to Greater London, and in one instance (the growth of industries) even beyond that area, while for some other purposes (e.g. education and health) the necessity of preserving continuity has limited the comparisons to the County of London. Again, in the investigations of special industries, the results of which will be published in later volumes, it is often found that the organisation of the industry, and the economic conditions under which it is carried on, determine the limits of the area which is most suitable for inclusion. In all cases however the aim has been to produce as true a picture as the conditions permit of the economic and social development and present character of the area which is the nearest successor to the London of Charles Booth's day.

The density of the population of London has become a good deal more uniform since 1891. The average density of the County of London as a whole has undergone little change, being 60 persons per acre in 1928 compared with 57 in 1891. But while the density is still by far the highest near the centre (153 in Shoreditch and 148 in Bethnal Green), all the most congested metropolitan boroughs have become less populous than in 1891, while the population of the outer boroughs has generally increased, and some of the extra metropolitan boroughs have now a density exceeding the average for the County itself. We shall see hereafter that these changes in the geographical distribution of population are closely connected with changes of over-

crowding and of transport facilities, partly by way of cause, partly effect, partly as a joint result of the same economic forces.

The alterations which have taken place in the distribution of the population of London by sex and age are analysed in Chapter II. Throughout the whole period London has shown a deficiency of children and juveniles and an excess in the age-group 20 to 45 as compared with the country as a whole, one important cause being the influx from other parts of Great Britain of adults in the prime of life. As will be seen however from the section dealing with birthplaces,[1] the influence of the influx of population on the life of London has become progressively less important throughout the period. Out of every thousand persons living in the County of London in 1891,[2] 633 were Londoners by birth. By 1921 this figure had risen to 707. Of the balance the number born in other parts of the country was 341 in 1881 and only 249 in 1921. The local distribution of the "country-born" element within the London area presents very much the same characteristics as in Charles Booth's time, the proportion, both then and now, of inhabitants born in all other parts of the United Kingdom being lowest in the poorest and most congested areas, especially those near the centre. It is in these areas moreover that the proportion of "country-born" has declined most rapidly. Thus in 1881 the number per 1,000 of population in seven of the poorest boroughs was 254, a proportion which was reduced to 122 by 1921. To test the matter another way, the figure for the inner ring of metropolitan boroughs was 298 in 1881 and only 194 in 1921.

The age-distribution of the London population has been very powerfully affected during the period under review by two causes, one of them continuous in its operation, the other catastrophic.

The continuous cause has been the progressive fall

[1] See page 67.

[2] The analysis of influx in Charles Booth's Vol. III (Poverty Series) was based on the 1881 Census.

of the birth-rate, and the simultaneous though less rapid decline of the rate of mortality. For every thousand women of ages 15 to 45, 121 children were born in London in 1891 and only 83 in 1921. The decline has of course not been confined to London, but has been general throughout the country. The fall in the "crude" birth-rate (i.e. without allowing for changes in age and sex distribution) has been a good deal greater than is indicated above, viz., from 31·9 per 1,000 of population in 1891 to 16·2 in 1928. Meanwhile the "crude" death-rate has fallen from 21·1 to 12·1, so that the rate of natural growth by excess of births over deaths has declined from 10·8 to 4·1.

The "catastrophic" cause has been the Great War, which not only destroyed the lives of a very large number of London men in the prime of life, but also greatly reduced the number of births. One result has been to increase the existing excess of females over males, an excess which rose from 11 per cent. in 1891 to 16 per cent. in 1921.

III

The percentage of the male population of the Survey Area who are following some occupation rose from 62·3 to 66·6 between 1891 and 1921. Meanwhile the corresponding percentage for females increased from 30·2 to 31. These figures may cause surprise, until the changes in age and sex distribution and in social habits are taken into account. The increase in the percentage of occupied males is mainly due to the fall in the proportion of children in the population, while the smallness of the increase of the percentage of females following an occupation, in spite of the greater tendency of women to enter industrial, commercial and professional pursuits, is partly connected with the increased disparity in numbers between the sexes, partly with the great falling off in the employment of domestic servants.

The available data as to the changes which have taken

place in London occupations and industries are assembled and analysed by Professor Bowley in Chapter X. There are, as he shows, insuperable difficulties in making a direct comparison, either by occupations or industries, between the London of 1891 and the Survey Area at the present time, owing mainly to the great differences of classification. There are three distinct sources of information: the Census returns, Charles Booth's re-classification of the Census material for 1891, and the statistics of Unemployment Insurance. As is shown however in Chapter X no adjustment or combination of these data can be made to yield a continuous chain of comparable statistics, and it is necessary to take three steps (1891–1911, 1911–21, and 1923–29) in order to arrive at even approximate results. These three periods fortunately correspond roughly to three distinct phases of industrial development: pre-war, war, and post-war.

It has however been found possible, so far as the County of London is concerned, to re-classify the Census returns of 1911, so as to compare with Charles Booth's occupational classification for 1891, while through the courtesy of the Ministry of Labour the results of the Unemployment Insurance statistics for recent years have been separately tabulated for the London area.

For the detailed results of the whole comparison reference must be made to Chapter X, and to the Tables in Appendix III.

Perhaps the most significant changes, for the purpose of the present survey, are those which took place between 1911 and 1921 (i.e. those showing the direct effect of the war), and those which have occurred in the post-war period. Among the chief changes in the former, or war, period were the great increase in the group of metals, machinery and vehicles, doubtless due to war demands, and the decline in the building trades, partly caused by the cessation of private building in wartime. The statistics show clearly the entrance of women not only into shops, commerce and professions, but also into the muni-

tions industries, while there is a heavy drop in domestic service, and also in dress-making.

The Insurance Statistics, which only become available for the period 1923–29, reveal that between those years the number employed in the building trades in the London area increased by 16 per cent., doubtless as the result of public schemes of house-building. It is somewhat surprising that the total number in the metal and engineering group, which had been artificially swollen by war demands, has continued to increase in recent years, but the explanation is the rapid growth of the newer branches, e.g. the electrical and motor industries.

Generally speaking, the analysis of occupational and industrial changes in the present volume must be regarded as preliminary to the special investigations of the principal London industries, which are being undertaken as part of the New Survey. The existing data have been examined, analysed, re-arranged and summarised, so as to supply the necessary framework and statistical starting point of these special inquiries, but the changes of classification make it unsafe at the present stage to draw any but the most general inferences from a comparison of the figures, without the aid of further intensive study of London industrial conditions.

IV

In any attempt to compare the level of material prosperity of the working population of London now and at the time of Charles Booth's Survey two preliminary questions present themselves. What is to be the datum period or starting point for the comparative indices, and what is to be the unit of measurement in terms of which the comparison is made?

(1) To take first the question of the "datum" period, the object is to compare present conditions with those prevailing at the time of Charles Booth's Survey. That survey, however, extended over a considerable period of years, so that no single year can be designated as the

most suitable starting point for comparisons with regard to the whole range of social and industrial conditions. Bearing in mind however that his inquiry into poverty was the first in order of time, it would probably be most convenient, if practicable, to take the year 1890, or a period centring in that year, as the starting point of comparisons of labour conditions. In point of fact this is the datum period which we have generally selected, where there has been a free choice. In some cases however we are limited in our choice by the fact that many of the relevant data are not available for the whole series of years. Information for example derived from Census reports is only applicable to one year in ten; systematic inquiries as to earnings have only been made at long and irregular intervals; and the collection of annual statistics of prices and wages did not begin until the year 1893 when the Labour Department of the Board of Trade entered on its work.

The difficulties of establishing a common datum year are therefore very great, though they are sensibly lessened by the fact that some of the earlier inquiries by the Board of Trade were retrospective, and it is therefore possible to work back to 1890 in the case of wages and prices, though at the cost of some sacrifice of comprehensiveness. As is shown on p. 114 the selection of the datum year is of considerable practical moment in respect of wages and prices, in view of the fall of prices between 1890 and 1894, which caused a rise in the level of "real" wages. In some of the other comparisons however the precise year chosen as the starting point is of relatively minor importance, and the decision has usually been determined by the nature of the data available. It will therefore be understood why there cannot be complete uniformity in the periods covered by the comparative statistics analysed in the present volume. All that can be said is that every effort has been made to prevent the unavoidable variations from vitiating the comparisons.

(2) In the second place we have to consider the nature of our measuring rod.

The factors which enter into the material welfare of the working population of London are many and varied, and, as will be seen from the figures assembled in later chapters, these factors have not changed at the same rate, or always in the same direction. Before any comparisons of well-being can be instituted, some means must be found to reduce all these different elements to some common denominator. The only practicable common measure, or at all events the first approximation to such a measure, is that of money value; and in times of economic stability, and for purposes of short-period comparisons, variations in the total money income of workmen's families afford a very fair measure of variations in their purchasing power, i.e. in the aggregate of material commodities and services which they are able to command.

Of course different households will obtain different amounts of satisfaction from identical incomes, for there is an art of expenditure and household economy, no less than of acquisition, and the uses to which any margin of income over the cost of necessaries may be put vary very widely. We are here dealing however with broad generalisations and approximations, and for these purposes it is true to say that, except for alterations in the general level of prices, the material progress of the working population of London could be not unfairly gauged by the changes in their average money incomes.

Unfortunately however the exception is of crucial importance, since the period of comparison, and especially the last part of it, has seen changes of price level of such magnitude as altogether to vitiate comparisons based merely on money values. Evidently the monetary unit of measurement has greatly contracted, and it therefore becomes of the first importance to determine how far this shrinking process has gone, or in other words what has been the change in the purchasing power of money as applied to the customary objects of working-class expenditure in London.

If we can solve this basic problem we shall be in a position to apply the necessary qualification to any series of figures showing the course of money wages and earnings, so as to make them express the true changes of real purchasing power. In particular we shall be able to convert into their present-day equivalents the income limits, which, in Charles Booth's Survey, corresponded to the various categories into which he classified the London population, and by reference to which he fixed the so-called "poverty line."

V

Enough has been said to show how fundamental for the purpose of the New Survey is the problem of "Cost of Living" which is explored at length in Chapter III. That chapter is divided into two sections, the former dealing with the cost of certain prime necessaries of life, i.e. food, clothing, rent, fuel and light, and the latter with various objects of working-class expenditure which are outside these main categories, e.g. alcoholic drink, tobacco, travel, amusement. It is only in respect of the four principal classes of necessary expenditure that the materials available permit of the construction of comparative long-period indices, and in fact these are the only categories by which average purchasing power can be reasonably measured. It is true that the "average" workman's family, which expends precisely the average amount on each category of necessaries, is but a figment of the imagination. But the limits of variation of expenditure on "necessaries" are very much narrower than in the case of "luxury" expenditure, which depends much less on imperative physical requirements and much more on individual tastes and preferences. Moreover there is no doubt that, throughout the period under review, expenditure on the four main items of necessaries named above has absorbed the bulk of the income of most workmen's families, especially those of the lower-paid strata. For these reasons the index of cost of living which is used

in this volume to convert money incomes into "real" incomes is based solely on the cost of the above-named four main items of necessary expenditure.

It will be seen from the discussion in Chapter III that the index of cost of living, as thus defined, has risen from 100 (on the average of 1889–91) to something between 180 and 187 on the average of 1926–8. The separate indices on the same basis are as follows: food, 174; fuel and light, 195; rent, 171; and clothing, something between 228 and 253.

In applying the index of cost of living to wage-rates and income limits, we are faced by the perplexing problem of how to treat the compulsory deductions now made from wages under the National Schemes for Health and Unemployment Insurance. These deductions were of course not made at the time of Charles Booth's Survey, but neither did the mass of the working population reap the benefits of insurance. If the worker's insurance contributions be regarded as a deduction from his income (or alternatively as an increase in his cost of living), it would seem necessary to treat the benefits which he receives during periods of disability or unemployment as additions to his average revenue. It is certain that such additions would on an average outweigh the deductions, inasmuch as the State and the employer together bear a much larger proportion of the total insurance contribution than falls upon the employee. If therefore for the sake of simplicity, both insurance contributions and benefits be ignored, the result will be to make any apparent improvement in material well-being appear somewhat less than the reality.

On the whole it has seemed best to treat any net advantage accruing to the working population through compulsory insurance as a separate and additional element in their well-being, rather than to attempt to allow for it in estimating their earnings.

There is however one important exception to this rule, which arises in fixing the present-day equivalents of the incomes of the classes living at or just above or

below Charles Booth's "poverty line." The incomes of these families as described by him were barely sufficient, and often less than sufficient, to procure the necessary minimum requirements in respect of food, clothing, shelter, fuel and light. Any margin for provision against such emergencies as ill-health, unemployment and old age was negligible. In reality those living under these conditions were rarely in the habit of making any such provision, and the emergencies in question were met in a fashion, as and when they arose, by extraneous assistance, e.g. by resort to the Poor Law or to private charity. It is incontestable that under present conditions these emergencies are very much more effectively met, and in these respects the section of the population living in "poverty" suffers much less physical distress than the corresponding section forty years ago. Nevertheless the fact remains that in Charles Booth's time the whole of the scanty income of such families was available without deductions for the primary needs of existence. On the whole therefore it has seemed desirable, following in this respect the precedent of Professor Bowley's previous inquiries into poverty, to treat the "minimum" insurance contributions as a deduction from income for the purpose of determining the present-day equivalent of Charles Booth's "poverty line." It will be found that the effect of making this allowance is to raise the equivalent of Charles Booth's income limit of 21*s.* (which, for a moderate sized family, marked the "poverty line") to about 40*s.*, or (say) 90 per cent. above the level of 1890.

It may be added that this result is confirmed by an independent analysis, based largely on the nutritive content of minimum dietaries, which will be discussed in a later volume.

VI

While the Cost of Living Index is based exclusively on the cost of prime necessaries, the information assembled on pp. 93–102 with regard to the cost of other objects

of workmen's expenditure is of great interest as throwing light on the use made of the margin of income above what is absorbed by procuring the essentials of existence, a margin which, as shown in Chapter IV, has materially widened since Charles Booth's time. It is evident from the data obtained that "with the notable exception of locomotion (and possibly also of amusements) the cost of the more important items of a workman's expenditure outside the prime necessaries of life has increased a good deal more rapidly than the cost of necessaries." The result of improved organisation and methods of traction is that the money cost of travel per mile is about the same as in Charles Booth's time, while the influence of the Cinema has kept down the average charge for the more popular grades of indoor amusements. On the other hand, there is much more travel and a good deal more frequenting of amusements, so that the average family expenditure on both these objects must have risen considerably.

Beer prices have risen enormously, mostly through taxation, but the volume of beer consumed per head in London has declined by about two-fifths, or if measured by alcoholic content by one-half (from about 46 to 23 standard gallons per annum). For this smaller quantity of a lighter beer the London workman now pays about one and a half times as much money as his predecessor spent on beer in Charles Booth's day.

Tobacco consumption per head in the country has more than doubled (the increase being mainly since the war), and as the price of the most popular brands of tobacco has also more than doubled, the average expenditure on this object must be more than four times as great as in 1890.[1]

VII

We are now in a position to carry our investigation a stage further, and to inquire what have been the changes during the past forty years in the average level

[1] No separate figures for tobacco consumption in London are available.

of material welfare of the London working population, as reflected in their rates of wages, earnings, hours of labour and employment.

The whole question of the changes which have taken place in average wages and hours of labour in London is discussed in detail in Chapter IV, where it is shown that since 1890 the average weekly time-rates of wages for skilled labour expressed in money have risen by about 106 per cent., and for unskilled labour by about 130 per cent., the average rise for skilled and unskilled occupations taken together being in the neighbourhood of 116 per cent.; or (considering the approximate character of the data) say between 110 and 120 per cent.

In the meantime however the money cost of the principal necessaries of a London workman's life has risen by an amount estimated in the preceding paragraphs at from 80 to 87 per cent. The effect of this change in the cost of necessaries is that the "real" rates of weekly time-wages in London, measured not in money but in purchasing power applied to essential objects of expenditure, have risen on an average by about 20 per cent., i.e. 14 per cent. for skilled and 28 per cent. for unskilled occupations.

Moreover this increased "real" remuneration is now obtained in return for a shorter week's work, the average number of hours constituting a full week's work having fallen by nearly 15 per cent., mainly since the war. Thus the average "real" remuneration for labour of the same kind and duration has increased by over a third. In the case of unskilled labour the rise has been even greater. One hour of such labour is now worth about half as much again as in 1890, measured in terms of the necessary commodities which it commands.

A comparison of time-rates of wages furnishes a useful index, and often the only practicable index, of the trend of wages over a long period. As a measure of changes in actual earnings however it has many imperfections, which are discussed in Chapter IV. For example, it takes no account of extra income through

piece-work or overtime, nor does it make any allowance for short time, or lost time, whether due to unemployment, sickness, or other causes. Nor does it take into account any changes which may have taken place in the numerical relation between the lower and higher paid classes of workers. What it does is to enable us to compare the price of a given quantity of the same kind of labour, either in terms of money, or of necessary commodities. To trace the course of actual average earnings it is necessary to take as the unit, not the particular occupation but the entire industry, and to adopt a method which shall take account of all forms of remuneration, however calculated, and of the various factors by which the actual earning power is increased or diminished.

Those who are familiar with the difficulties of obtaining comparative data of earnings will not be surprised to learn that the data available for the purpose of a long-period Index of weekly earnings in London are far more scanty than those relating to rates of time-wages. The whole subject, which is extremely technical, is discussed on pp. 124–130, where it is shown that the only groups of London industries for which even a moderately satisfactory index of earnings over a long period can be constructed are the Building, Engineering, Printing, and Boot and Shoe trades, and that owing to the long and irregular intervals at which inquiries into earnings have been made, it is necessary to begin the comparison with the year 1886 in place of 1890. The result is to show that average money rates of weekly earnings in these industries have risen by about 133 per cent. between 1886 and 1928. This figure takes into account such factors as piecework, overtime and short time, but not absences from work for more than a week at a time. Reasons however are given for the belief that the effect of sickness and unemployment in London in diminishing average income has decreased since the time of Charles Booth's Survey. The percentage of absence through sickness has risen somewhat but not

greatly, since the establishment of universal insurance, but the effect on income of this slight increase must be much more than balanced by the benefits resulting from health insurance. So far as can be judged from very imperfect data, the percentage of unemployment in London in 1927–9 was somewhat, but not much higher than in Charles Booth's time, and the effect of this slight increase on average earnings must be more than offset by the benefit received during idleness under the Unemployment Insurance Scheme.

The effect of applying to the figures of money earnings the index of cost of living is to show that "real" average weekly earnings in the four groups of industries have risen by 30 per cent. between 1886 and 1928.

This calculation as to the movement of earnings is limited to four groups of industries, but as the rise of wage-rates in these industries has been less than in London occupations as a whole,[1] it is reasonable to conclude that the general average rise of "real" industrial earnings of male workers in London has been somewhat greater, say about one-third as compared with the time when Charles Booth instituted his inquiry. This rise has been achieved in spite of the fact that the standard weekly hours of labour have meanwhile been shortened on an average by nearly an hour a day.

The fact that the average workman in London can now buy a third more of articles of consumption in return for labour of an hour's less duration per day affords conclusive proof that the material conditions under which the mass of London workers live have considerably improved. In order, however, to appreciate the precise effects of the rise of average level on the amount and distribution of London poverty, and on the standard of life of the London worker, we need to dig somewhat deeper, and to inquire what has been taking place in the relative distribution of the different elements of which the general average is composed.

If it could be assumed that the "average" rise in real

[1] See p. 128.

earnings applied to the earnings of each individual worker, the task of the present survey would be comparatively simple. For an increase of one-third in the real earnings of every worker would suffice to lift the whole of Charles Booth's classes "C" and "D" above the so-called "poverty line," together with an appreciable proportion of those more deeply sunk in poverty, who were included in his class "B." The effect of such a transfer would be to reduce Charles Booth's proportion of poverty from over 30 per cent. to less than 8 per cent. at the present time.

It would however be a very hazardous prediction that the result of the present survey when complete will be to show just this percentage of the present population of London living below the "poverty line." For it has to be remembered that an average is made up of a number of differing elements, and that what statisticians call the "spread" of the figures is often as significant as their arithmetic mean. It would be theoretically consistent with the results shown in Chapter IV and summarised above, that there had been a concurrent increase at both "poles" (i.e. both of well-being and of poverty) at the expense of the intermediate grades, the increase of poverty being more than offset in the general average by the growth of numbers and earnings of the well-to-do. While however the actual changes which have taken place in the proportions of the different social classes cannot be known with any certainty until the New Survey is complete, all the data at present known, and especially the fact that the rates of wages of unskilled labourers have risen more rapidly than those of skilled workmen, suggest that the percentage of poverty (according to Charles Booth's standard) must have considerably diminished. Moreover the real privation, suffering and apprehension endured by those still living in poverty have been largely reduced by the operation of various forms of public social services.

It is however sometimes contended that one effect of these social services may have been to increase

poverty, by causing the survival of a higher proportion of persons unfitted to be fully self-supporting, or even that the inter-breeding of such persons may be resulting in an actual deterioration of the race, through an increase in the proportion of "subnormal" births. It has also been suggested that the vast growth of public social services may have tended to weaken the sense of individual responsibility and self-reliance, and thus to swell the proportion of shiftless and "pauperised" persons who are content with a low standard of existence, provided that they are sheltered from the major risks of life.

It is beyond the scope of the present preliminary volume to attempt to ascertain definitely how far all or any of these influences may have actually affected the proportionate distribution of poverty and well-being in London, though it will be one of the objects of the survey itself to throw light on these difficult problems. Nevertheless it is of interest to inquire how far the data already available point to a growth or decline in the element of the London population, which is economically, physically or mentally "subnormal."

This inquiry forms the subject of the following paragraphs.

VIII

(1) The first obvious test of the change which has taken place in the economically "subnormal" element of the London population is to ascertain the growth or decline of the number of persons habitually living below the standard of family life, e.g. the inmates of common lodging-houses or casual wards, and "homeless" persons.

Of these much the best test is the number of inmates of common lodging-houses, the great bulk of whom were classed by Charles Booth in his lowest category (Class A). It will be seen from the table on p. 408 that in 1889 there were 988 common lodging-houses in London accommodating 33,964 persons. In 1928 there were only 158 such lodging-houses with accommodation for 16,736 persons, or almost exactly half the number.

The evidence shows that the average number of inmates has been roughly proportionate to the accommodation provided, so that it is a fair inference that the number of persons belonging to the common lodging-house class in London has been halved in forty years, in spite of the increase of population, and of a great improvement of the standard of accommodation in the lodging-houses themselves.

The records of casual wards are of less value for the present purpose, partly because their inmates are to a large extent tramps, who form no part of the resident population of London, and partly because, as shown on p. 368, the number at any given date depends much more on administrative than on economic conditions. Such as they are, however, the figures show that the inmates of London casual wards fell from 977 at the beginning of 1888 to 818 at the beginning of 1929, in spite of the growth of population (p. 386).

Since 1904 the London County Council have made an annual census (usually in February) of "homeless persons" or (more strictly) of persons found sleeping out of doors or in shelters without beds. For the years 1904–11 the average number was 2,217. In 1912–14 it fell to 677. During the war it sank to 53, and in the ten years 1920–1929 it has averaged less than 90. These figures, like those of casual wards, bear little relation to the prevailing economic conditions. The high figures for 1904–11 were attributable to the distribution of free food on the Embankment, and their subsequent shrinkage to the institution of an Advisory Committee with an Embankment office and a systematic scheme of control and assistance.

It is quite clear that the available statistics of the inmates of common lodging-houses, vagrants and homeless poor lend no colour to any suggestion that the economically "subnormal" element of the London population has grown. On the contrary they suggest that it is much smaller than it was at the time of the Booth Survey.

IX

(2) A second test which would be of great value if we were in a position to apply it with any degree of confidence would be the growth or diminution of the proportion of mental defectives in the London population. For unquestionably the less pronounced forms of deficiency (generally termed "feeble-mindedness") constitute a fruitful source of poverty and industrial instability. Unfortunately no comparable ascertainments of mental deficiency at different dates in London exist, and neither the Royal Commission of 1904–8 nor the Mental Deficiency Committee of 1924–29 dealt specially with London, though the six areas examined by the latter committee included one extra-Metropolitan Borough within the New Survey Area. Moreover, any comparison of the results arrived at by these two bodies is affected by the great differences in the degree of completeness of the investigations. The recent Committee declared that the great increase in the proportion of defectives discovered by them "is probably due in the main to more complete ascertainment." While they plainly inclined to the view that there had been a real increase in the incidence of mental deficiency at least in the rural districts, it is of interest from the point of view of the present survey to note that the Committee found (i) that the incidence of mental deficiency in the three rural areas was 55 per cent. higher than in the three urban areas; (ii) that the extra-Metropolitan Borough which falls within the present Survey Area had the lowest incidence, the ratio per 10,000 of population being 57·1 as compared with 67·1 for the urban and 104·9 for the rural districts.

In the absence of any continuous record of mental deficiency in London on a comparable basis, we can only obtain an indirect indication of trend by having recourse to such existing data as relate to phenomena which are nearly related to mental deficiency. The recent Committee made use of data of this kind to check the represent-

ative character of the areas which they selected. The criteria they used for this purpose were the ascertainments of mentally defective children by Education Authorities, the incidence of insanity and the number of mentally infirm persons in receipt of relief.[1] None of these sets of figures is of course suitable by itself to be used as an index of mental deficiency. Insanity is not the same as mental deficiency, though, as stated in the Report, "they are so closely related that it is now recognised that a general correlation exists between the incidences of these two abnormal conditions." The "mentally infirm" under the Poor Law include a number of persons suffering from senile decay as well as true mental defectives. Lastly, the Education Committee's figures relate solely to juveniles, and for reasons given below the standard applied in recent years has probably not been uniform. Nevertheless these three sets of figures when looked at together have a certain value for the purpose of indicating a trend, and they are set out in the Table on p. 407 which is summarised below in triennial periods.

MENTAL DEFICIENCY, LUNACY, ETC., IN LONDON, 1902–1928.
(COUNTY OF LONDON ONLY.)

Triennial Average.	Lunatics (Pauper, Criminal and Private) per 10,000 of Population.	Persons with Mental Infirmity relieved per 10,000 of Population.	Ascertained Number of Mental Defectives among 10,000 Children.
1902–4	56·9	50·1	(40·2) [2]
1905–7	61·3	53·9	(71·4) [2]
1908–10	64·4	56·7	95·3
1911–13	67·7	59·6	113·9
[War period]	—	—	—
1920–22	57·1	52·1	108·0 [3]
1923–25	57·5	53·7	111·1
1926–28	58·1	55·6	96·4 [4]

[1] The Committee also used the ascertainments by Mental Deficiency Committees, but for various reasons, including those set out in their Report (Vol. I, pp. 32–3), it is considered that these figures are not sufficiently comparable to be of value.

[2] In these years the ascertainment was incomplete.

[3] 1920. [4] 1927.

The figures in the first two columns show that the burden on the community of lunacy and mental infirmity was an increasing one up to the outbreak of the war, after which there was a very marked decline, amounting to about one-sixth in each case. Since the war the figures have again begun to mount, but have not yet reached the level of twenty years ago. The curious and similar course of these two sets of figures suggests its own explanation, which is confirmed by further investigation, viz. that both the gradual rise and sudden break were due entirely to causes affecting length of survival and not to the incidence of new cases. It is known that both classes of inmates survive much longer in institutions than outside. Hence in normal times there has been a cumulative increase, which was suddenly turned into a sharp decrease by the operation of war conditions. Mental patients are peculiarly incapable of adaptation to changed environment, and the conditions of crowding, understaffing, and less nourishing diet, resulting inevitably from the Great War, combined with the epidemic of influenza, very greatly increased the annual deaths of lunatics, which in England and Wales rose from about 11,000 just before the war to nearly 20,000 towards its close.

If the influence of survival be eliminated by considering only the incidence of new cases of lunacy, we obtain a very different result, as is shown by the Table on p. 408 (which, however, applies to England and Wales and not specifically to London). The figures show that the proportion of the population annually admitted to institutions for the insane after rising from 5·73 per 10,000 in 1890–92 to 6·73 in 1902–4, has fallen continuously since the latter date, until in 1929 it was 5·57, or less than in Charles Booth's time.

The figures for mentally defective children are subject to the double qualification that in the earlier years the ascertainment was incomplete, while more recently the standard has varied, partly through the application of more stringent tests since 1913, partly from other

causes. The apparent decrease since 1911 does not therefore probably represent the true position, and independent evidence suggests that since 1913 the real proportion has remained substantially constant.

A review of the above data, imperfect as they admittedly are, does not appear to justify the belief that during the past generation there has been any increase in the incidence of new cases of mental deficiency in London as distinguished from the effects of longer survival. Further investigation in different parts of the Survey Area would be necessary before definite conclusions could be reached as to the actual proportion of mental defectives in the population and even then there would be no means of comparing the results with those for any previous date.

X

(3) The third test which naturally suggests itself for consideration is the growth or diminution of pauperism in London, and this would be probably the best criterion of all, if we could be sure that we are comparing like with like, i.e. that the classes of the population who resort to public assistance are similar in economic grade to those who were dependent thereon in Charles Booth's time. It is however made clear in Chapter XII, where the whole question of poor relief in London is discussed by Sir Allan Powell and Mr. Blight, that this assumption is not legitimate. Both the period when Charles Booth undertook his survey, and that which has elapsed since the war have been highly abnormal in respect of Poor Law policy and practice. This might not matter much for comparative purposes if the abnormality were in the same direction in both cases. In point of fact however the volume of poor relief (and in particular of outdoor relief) was exceptionally low in the period covered by Charles Booth's Survey, and has been abnormally high since the war, for reasons which in neither case have been closely related to poverty.

The reaction towards stricter administration which

followed the great increase of poor relief in the years between 1860 and 1870 and the movement initiated in the 'seventies for the reduction of outdoor relief were at their very height at the time when Charles Booth began his inquiry. The dominant policy in well-managed London Unions at that time was to restrict outdoor relief so far as possible to the sick and aged, and the trend of opinion among social observers and administrators was towards the eventual abolition of such relief for the "able-bodied." In Stepney the number of "outdoor poor" was actually reduced from 7,602 in 1869 to 177 in 1890. On January 1, 1888 the number relieved in London was 117,143 (or about 283 per 10,000 of population) of whom rather more than half were in institutions. For the next twenty-five years, i.e. up to the outbreak of the Great War, the same general policy obtained, qualified however by the introduction of important ameliorative measures outside the Poor Law, such as pensions and insurance. The number of persons receiving domiciliary relief had sunk from 56,000 in 1888 to less than 35,000 in 1913. The fundamental idea which underlay pre-war Poor Law policy (though of course not always strictly and consistently observed) was that constructive assistance to "helpable" cases should in the main be given by private charity, between which and Poor Law administration there should be close co-operation.

All such ideas, hopes and forecasts were however completely upset by the abnormal conditions, both economic and psychological, which arose immediately after the conclusion of the war. As is shown in Chapter XII the acute depression which set in at the end of 1920 compelled the temporary abandonment of all attempts to check the demand for outdoor relief, and the result was a rise in the number of persons so relieved in London from about 23,000 in 1920 to 196,000 in 1923, since when it has fallen (with a temporary relapse in 1926–27) to 126,000 in 1929. It is well known that this abnormal increase was not

wholly due to economic causes, but in part to the adoption of a deliberate policy by Boards of Guardians in certain poor boroughs to use the machinery of poor relief not merely to relieve destitution but to raise the standard of life, and that the administrative action taken to check the abuses to which this policy gave rise is largely responsible for the reduction since 1927. In these circumstances it is evident that "there has been no close connection between poverty and the measure of pauperism which these figures disclose." [1]

The drop of 60 per cent. between 1927 and 1929 in the number of able-bodied persons relieved in London on account of unemployment was out of all proportion to any improvement which had taken place in London employment.[2] The effect of administrative action is brought out in a very striking manner by the figures set out on p. 376 showing that between June, 1927 and 1929 the total number receiving "unemployed relief" in four poor areas[3] fell from 15,388 to 3,773, or to less than one-quarter.

From all these facts and considerations it is abundantly clear that an over-all comparison between London poor relief in the time of Charles Booth and at the present time, while most illuminating and suggestive in connection with any study of social institutions, administrative methods, or movements of opinion, is of little value as an index of poverty.

If the statistics of poor relief during the past forty years afford no safe index of the economic level at which the people live, they bring out clearly the profound change which has taken place in the attitude both of the administrative authorities, the general public, and the recipients of relief, towards public assistance and its relation to the other social services. Only time can show whether this change of outlook is permanent.

For our present purpose it is sufficient to draw the negative conclusion that the statistics of poor relief throw

[1] See Chapter XII, p. 372. [2] See Table on p. 354.
[3] i.e. Poplar, Bethnal Green, Bermondsey and West Ham.

little light on the question of the growth or decline of the "subnormal" element in the London population. What they do show is that a larger number of persons (including many whose economic conditions are in no way subnormal) are now willing to avail themselves of various forms of public assistance.

The fact that poor relief has been made less repellent and unpopular, together with the vast increase of the social services, has one immediate consequence for the London Survey, viz. that the life of members of Charles Booth's Class B and of many members also of Class CD has been profoundly altered since he described it forty years ago. Quite apart from any decrease in the number of those living below the "poverty line," the most dreaded features of that life have been largely removed. We may still describe these classes as "poor" and "very poor," but we have no longer to think of them, as Charles Booth regarded them, as hanging on the brink of a gulf of destitution.[1]

XI

It remains to consider how far the effects of casual and intermittent employment of which London has always been a centre may have operated to increase the economically "subnormal" element in the London population.

The changes which have taken place in the incidence of unemployment in London are dealt with by Sir William Beveridge in Chapter XI, and some of the results arrived at in that chapter have already been referred to from the point of view of their effect on the level of average earnings. The difficulties of obtaining comparable data are very great, but after all allowances the conclusion is arrived at that in the last few years the percentage of unemployed workpeople in London was slightly higher than in the period in which Charles Booth conducted his survey.[2] It also appears that the 1927–29 percentage of unemployed in London was about the

[1] Series I, Vol. I, p. 131.

[2] The average of 1887–1903 has been taken.

same as in the year 1913–14.[1] In this connection it is to be remembered that the basic industries which have suffered most acutely from the long-continued post-war depression are very slightly represented in London, whereas the building trades have been stimulated by the demand caused by the housing shortage. It is evident that, if the additional percentage of unemployment be spread over the whole body of London workers, its effect on social condition and earning power is much more than counterbalanced by unemployment benefit. In relation therefore to the problem of the "subnormal" element, the question of London unemployment resolves itself into one of distribution and incidence, rather than of total volume.

To the student of social conditions, the problems of unemployment and under-employment have a much wider and deeper significance than is indicated by the mere loss of earning power. The depressing and deteriorating effects of prolonged idleness on the workman are only too well known, but the evils of casual and intermittent engagements, resulting in persistent under-employment, though they are perhaps less immediately obvious, may in the long run be even more far reaching and pernicious. The eastern section of London, which forms the "hinterland" of its port, on both sides of the Thames, has always been a great centre of casual employment, and the maintenance of a "pool" of unskilled labourers, who are economically redundant in comparison with the average volume of work offered, and yet are intermittently called on to cope with the peaks of a fluctuating demand, has long been recognised by social observers as one of the most potent sources of economic degeneration. The evils of casual labour at the London docks were graphically described in the first volume of Charles Booth's Survey. Since that time very much has been done to increase the regular as compared with the

[1] Since the date referred to in this Chapter there has been a substantial rise in the rate of London unemployment, which however remains less than half the rate for the country generally (August, 1930).

casual element in dock-service, as well as to raise the level of wages for port labourers, and also (since the war) to alleviate the results of unemployment and under-employment by means of insurance. There are no long-period data of a comparable kind which would enable a statistical estimate to be formed of the net result of all these efforts on the problem of casual employment, but an intensive study of the position of dock labour at the present time as compared with forty years ago is now being made as part of the New Survey, and the results so far arrived at indicate that the prevalence of casual engagements in the Port of London has become a less important factor in London poverty than it was in Charles Booth's time.

The general trend of commercial and shipping development, especially since the establishment of the Port of London Authority, has on the whole been in the direction of greater regularity in the demand for port labour and since the War there has been a systematic effort to regulate the supply by a scheme of registration. It cannot by any means be claimed that the problem of casual dock labour has been solved, and in some respects its permanent solution on a sound basis may have been hindered by measures which, by making the life of the casual less unattractive, have weakened the motive for thorough decasualisation. Nevertheless it is fairly certain that, as compared with Charles Booth's time, the work offered by the port is now divided among a relatively smaller number of labourers, and that the casual fringe who only succeed in obtaining a very small share of the work has been very greatly diminished.

It may be that the result of changes in the organisation of dock employment has been to displace the port from its former position as the main focus of casual labour and under-employment, and to transfer its unenviable pre-eminence in this matter to other branches of intermittent employment characteristic of the life of the great city.

XII

The direct connection of crime and poverty is probably a good deal less close than is popularly supposed —much less so than their indirect connection as common products of the same predisposing conditions, e.g. mental defect or abnormality whether hereditary or acquired. Though Charles Booth included the "criminal and semi-criminal" in the lowest class (A) of his poverty scale, he found it quite impossible to enumerate them by the methods applied to other classes, and the difficulty is certainly no less to-day. The fact is that persons with vicious and criminal propensities are found in all economic strata, being marked off from the rest of the community by character and temperament rather than by degree of material well-being.

Professor Cyril Burt, one of the most distinguished living authorities on the psychology of juvenile crime, has recently made a careful analysis of the causes of juvenile delinquency on the basis of a sample of cases drawn mainly from London.[1] Although more than half the cases analysed came from families living below the poverty line, poverty with its concomitants only ranked as the "major cause" of crime in the case of 3·2 per cent. of the boys, while among the girls it did not figure as a "major cause" at all. With both sexes poverty appeared as a minor contributory factor in a much larger proportion of the cases. Using Charles Booth's categories, the percentage of the juvenile delinquents belonging to classes below the "poverty line" was found to be much higher than for the population generally. Analysis however indicated that more often than not the poverty operated indirectly rather than directly, i.e. through its various concomitants, such as over-crowding and the absence of facilities for recreation.

On the other hand, congenital factors were found to be very much more frequent among the "major" causes.

[1] Cyril Burt, *The Young Delinquent*. See especially Table on pp. 64–5 and the section on "Home Conditions," p. 66 ff.

"If we consider in each case the major factor alone we find it to belong to the congenital group among 36 per cent. of the boys and among 41 per cent. of the girls: so that in well over one-third of all the cases but in rather less than one-half, some deep constitutional failing proves the primary source of misconduct." [1]

There still remained a balance of over 60 per cent. of Prof. Burt's cases in which the "lawless actions have been precipitated primarily by the difficulties of their environment or by the events of their own past life," including *inter alia* want of discipline, defective home conditions or family relationships, bad street companions and detrimental interests, together with all manner of acquired physical and psychological defects.

Without laying stress on the actual percentages, which would doubtless be varied if the sample included adults as well as juveniles, or if it were increased in magnitude, or if the data were interpreted by another observer, the plain inference from Professor Burt's analysis is that the main connection of crime (or at least of juvenile crime) with poverty in London is not one of direct causation, but something much more complex, a large proportion of cases being the result of factors of environment and heredity, which are also among the chief predisposing causes of economic degradation.

The course of crime in Greater London between 1893 and 1928 is traced by Sir Edward Troup in Chapter XIII, the starting-point being the year in which the Home Office criminal statistics were recast. The result of the analysis is to show that crimes of violence have decreased considerably (from 94 to 61 per million of population).[2] Crimes against property have also been very largely reduced, though a comparison with the experience of the home counties suggests that the great decline in burglaries, house-breaking and minor larcenies is partly at least accounted for by the use of the

[1] Cyril Burt, *The Young Delinquent*, p. 605.

[2] For the sake of comparability all the figures given below with regard to crime are "standardised" on the basis of a million of population.

motor-car whereby the London burglar is able to extend the range of his activity to the country districts.

After making all allowances however, it is clear that there has been a real decline in crimes against property in London. On the other hand such offences as obtaining money by false pretences and other frauds show an increased incidence (121 to 181) over the whole period, which Sir Edward Troup connects with "the facilities for such practices which result from improved education." Offences which are directly related to social and economic conditions and habits have on the whole greatly diminished. Cases of drunkenness have dropped from 5,824 to 3,814; "a large reduction but less than that for the whole country." This decrease is of course attributable in large measure to the restrictions on drinking through high taxation and limited hours. There are very many fewer offences connected with destitution, e.g. cases of begging and "sleeping out" (under the Vagrancy Acts) have shrunk from 522 in 1893 to 223 in 1927. Here again this great improvement is doubtless largely attributable to the measures referred to on p. 369 for dealing systematically with vagrants. The statistics of sexual crimes are inconclusive, but on the whole Sir Edward Troup infers that "the standard of sexual morality is lower."

The effects of improved economic conditions and the spread of education on crime generally can be only surmised rather than strictly proved and measured, since the volume of crime is the net resultant of a large number of inter-acting causes and influences, whose separate effects cannot be disentangled by statistical methods. It is however clear that a great deal has been done in recent years to reduce crime, and to prevent its repetition, by such means as boys' clubs and scouts, the institution of the "Borstal" treatment for youths who have fallen into criminal habits, and the introduction since 1907 of the probation system.

No mention has been made above of a class of offences which contributes very largely to swell the criminal

statistics, but the majority of which are not committed by persons who would be generally regarded as belonging to the criminal classes. Exceeding the speed limit or neglecting to send a child to school will serve as examples of offences of this type. Statistics of these classes of offences show very diverse trends. Thus while offences against the Highway Acts (mainly motor-car offences) have increased from 266 to 10,272, those against the much longer established provisions of the Education Acts have sunk from 2,820 to 622.

The comparative statistics furnish no direct answer to the questions how far serious crime in London is confined to a limited and recognisable criminal class, and whether the number of criminals is increasing or diminishing. The statistics measure the comparative frequency of various types of crimes, but they shed no light on the "spread" of crime, or the magnitude of the criminal element of the London population at different dates. Any attempt by direct investigation to estimate the number of criminals in London must be deferred until a later volume, and such an investigation is attended by many difficulties.

It would seem natural to assume that the effect of all the "cultural" agencies, such as education, clubs, scouts and means of wholesome recreation, combined with the rise in the standard of life, must have tended *pro tanta* to dry up the sources from which the London criminal population is recruited. It cannot however be said that the statistics of age-distribution of offenders charged which have so far been collected [1] give support to the view that there is any great decline in the proportion of younger recruits to a life of crime. No doubt the crude figures are affected by many factors, e.g. the relative longevity of the criminal and normal population. Nevertheless they suggest the thought that the various ameliorative agencies have been working against difficulties and counter-influences, which need further intensive investigation. It would not be surprising to find

[1] These statistics are not printed in the present volume.

that among the most serious of these impediments is the persistence of slums and overcrowding.

XIII

The general effect of the five preceding sections may now be summarised.

Such comparative statistics and other information as exist with regard to the proportion of the inhabitants of London living below the standard of family life, or mentally or morally subnormal, or economically incapable of self-support, while far from adequate as a basis for exact enumeration or for definite and final conclusions, create a strong presumption that there has been a diminution rather than a growth of these elements of the population since the time of the Booth Survey.

While therefore it is necessary to await the results of the New Survey in order to bring the matter to a decisive test, there is nothing in the information at present available as to the relative advance of different sections of the population which suggests that those living below Charles Booth's poverty line have received less than their full share of the benefit.

This provisional conclusion receives support from the fact that the proportionate advance of "real" rates of wages since 1890 has been just about twice as great for unskilled as for skilled occupations, and that the rise in minimum rates of pay in the so-called "sweated" industries since they came under the Trade Boards Act, 1910, has been above rather than below the average rise for occupations generally.

XIV

We may now pass from the consideration of the changes which have taken place in the level of the material well-being of London workpeople as measured by their command over commodities and services, and the proportion which poverty bears to prosperity, and proceed to another branch of the subject, viz. to examine how far the physical and cultural environment within

which London life and labour are carried on, has been transformed in the past forty years, and in what respects the changes affect the ability and desire of the London workman to use his increased purchasing power in such a way as to obtain the means of a fuller and higher life.

Two of the most striking examples of physical environment which profoundly affect the workman's standard of well-being are the character of the dwelling in which he lives, and the means of locomotion which enable him to move, and which moreover delimit the range of his mobility. These two questions are discussed in detail in Chapters V and VI, which deal respectively with the changes in rents and overcrowding and with the growth of transport and travel in the London area. The two problems of housing and transport are, as is well known, very closely connected, since the necessity of living in a particular area narrows the workman's choice of a dwelling, and frequently compels him, in spite of high earnings, to endure inconvenience or overcrowding. Hence every increase in mobility arising from improved means of travel widens the area within which such a workman can exercise his choice of a residence. Imperfect mobility is at the root of the most serious overcrowding difficulties.

Chapter V explains in detail the basis of the comparison of overcrowding in the London area since the time when Charles Booth began his survey. It was at his initiative that the Registrar-General first included in the Census inquiry a question as to the number of occupants per room in small tenements. This question was afterwards extended to all classes of tenements, and the answers to it afford the only basis for a long-period comparison of overcrowding. For the difficulties arising in connection with such a comparison and the mode in which they have been solved, reference must be made to the chapter itself. The net result is to show that, over the period of forty years, there has certainly been some decrease in the more acute forms of overcrowding, if an average be taken over the

whole of the Survey area, but that this "average" improvement has been very unevenly distributed, both in point of time and of place, there having been in some decades and in some localities actual increases of overcrowding, though insufficient to balance the improvement which has taken place elsewhere or in other periods.

Over the whole period 1891 to 1921 there has been a marked tendency towards an increase in the proportion of small as compared with large tenements, combined with a diminution in overcrowding in the smaller tenements. Thus in the County of London the number of tenements containing less than five rooms rose by a quarter between 1891 and 1921 while that of the tenements of larger size declined by a sixth. Simultaneously the level of overcrowding in small tenements (as measured by the number of persons per thousand living two or more[1] to a room) fell from 534 to 374.

As pointed out on p. 154, the latter figures, if read by themselves, exaggerate the rate of improvement, since overcrowding is much more rife in small dwellings than in large, and the former have been increasing at the expense of the latter. Reasons are given for estimating that, if tenements of all sizes be taken into account, the "rate" of overcrowding in the County of London would have been 336 in 1891 and 268 in 1921.

The above figures relate solely to the County of London, the greater part of which was already built over in Charles Booth's time. In the ring of boroughs outside the County, where urbanisation has been proceeding rapidly, there has been an actual increase of overcrowding, though its total amount is of course far below that of the central area. Between 1891 and 1921 the "rate" of overcrowding in the outer ring rose from 149 to 190.

Within the County of London itself the rate of overcrowding has been naturally highest in the most central areas, where it reached 513 in 1891 and was still as

[1] This was the standard used by Charles Booth. The results are not to be confused with the standard "over two to a room." (See p. 150.)

high as 465 in 1921. In the middle ring (i.e. the outer circle of boroughs within the County) the corresponding figures are 276 in 1891 and 228 in 1921. It is shown in Chapter V that a definite check to private house building in London (over and above the effects of the ordinary cyclical fluctuations of business activity) was noticeable in the decade 1901–11, and especially in the latter half, with the result that the number of new houses erected in Greater London fell from over 27,000 in 1899 to less than a third of that number in the year before the war. This arrest of new building was contemporaneous with an appreciable slowing down of the rate of improvement in respect of overcrowding, which actually increased between 1901 and 1911 in eighteen out of the twenty-nine metropolitan boroughs. During the war the stoppage of private house building in London was almost complete, and the housing problem became very urgent, both here and in the country generally, as soon as peace was restored.

Since the war public effort and funds have been unsparingly used to remedy the shortage. Up to the end of 1928 provision had been made in Greater London for new accommodation for more than 800,000 persons, i.e. more than twice the estimated growth of population. The part played by public enterprise may be seen from the fact that of more than 200,000 new houses erected less than half were built by unassisted private enterprise, and of these a large proportion were houses not intended for workpeople.

The fact that more than half the houses built during these years were either erected by public authorities or subsidised out of public or philanthropic funds stands in marked contrast to the practice of the pre-war period, when the vast majority of houses were built by private enterprise.

The chief centres of housing activity in Greater London since the war have been outside the County boundary, and in some cases (e.g. Becontree) outside the present Survey Area, though they cater for the needs of its

population. It is abundantly evident that the whole problem of housing, congestion and overcrowding in London is intimately bound up with the problem of mobility and means of travel.

The acute shortage of house accommodation would in ordinary circumstances have led to a very great rise of rents, but this rise was severely limited by the Rent Restriction Acts. The course of rents of working-class dwellings in London since 1890 is discussed on p. 144, with the result that, after taking all circumstances into account, the average rise in working-class rents including rates in London between 1890 and 1928 is estimated at about 71 per cent., nearly four-fifths of the rise having taken place since the beginning of the war. Allowing for the fall in the purchasing power of money this means that the "real" level of working-class rentals has fallen—and under these conditions it is not surprising that the building of workmen's dwellings by private unassisted effort has shown little sign of reviving.

The Census figures do not, of course, enable us to trace the course of overcrowding in London in years subsequent to 1921, and for any information on this matter it is necessary to await the results of the sample house inquiry now being made in connection with the present survey.

XV

The development of transport facilities for passengers and the growth of travel in Greater London since the beginning of the present century form the subject of Chapter VI.

The three principal means of local travel available for persons with limited means are by tram, omnibus and underground railway. During the last thirty years the route mileage of local and underground railways has doubled, and that of the tramways has increased by 50 per cent., while the length of roadway served by omnibuses has trebled. Meanwhile there has been an actual decline in the route mileage of the main line railways

within Greater London, which have lost much of their local traffic to one or other of the means of transport referred to above. The enhanced efficiency of the various transport agencies is by no means fully measured by the increased mileage over which they operate, for there has also been a great increase of frequency, speed and comfort.

The response by the London population to this vast extension and improvement of travel facilities is shown by the striking figures assembled in Chapter VI. Since the beginning of the century the number of passengers carried by tramway or underground railway has trebled in each case, while the number carried by omnibus has actually risen sevenfold.

The omnibus and the tram are pre-eminently the means of short distance conveyance, over four-fifths of the passengers in each case travelling at fares of 2*d.* or less. The underground railways cater chiefly for the intermediate distances, more than half their ordinary passengers travelling for 3*d.* or more. For still longer distances the main line railways continue to carry a large number of local passengers.

Though in the meantime there has been a great increase of population in Greater London, the expansion of travel has far outstripped that of population, the number of journeys per head of population by tram, underground and omnibus having exactly trebled in thirty years, and more than quadrupled in forty years. The annual number of such journeys has risen since 1902 from 70 to 118 by rail, from 54 to 135 by tram, and from 42 to 243 by omnibus.

The developments indicated by the above figures have had profound effects on the distribution of the London population, and the conditions of housing, by increasing the range of mobility of the London worker, while, as will be seen in Chapter IX, they have also greatly altered the conditions of access to open spaces, outdoor recreation, and cultural opportunities, and exercised a levelling effect on prices, wages and con-

ditions of life and labour throughout the whole area. The effects of transport improvements on social and economic conditions have been the more marked, inasmuch as there has been a concurrent shortening of the customary working hours, which has enabled many London workmen to live at a greater distance from their work. This accounts partly for the transference of population and new house building from the centre to the outer ring of the Survey Area or even beyond.

The outstanding features of the technical development of London transport in the past thirty years have been the substitution of electricity for steam on the local railways, which was just beginning in 1900, the instalment of electric traction on the tramways in the first few years of the present century, and the displacement of the horse-drawn bus by the motor bus, which was practically completed when the war broke out. From the point of view of organisation the most important changes in the period have been the unification of the London tramway system under the management of the County Council, and the consolidation of most of the underground railways and the bulk of the omnibuses under a single control.

The relative importance of the three main transport agencies in increasing the mobility of the London population has greatly changed in the past thirty years. In 1900 the railways had a decisive pre-eminence as regards the number of passenger journeys. By 1907 the newly electrified tramways had caught up with them, and from 1923 onwards both railways and tramways have been surpassed by the omnibuses in number of passenger journeys, though it has to be remembered that the average journey by rail is considerably longer.

While the growth of the travel habit in London has been powerfully stimulated by the improvement of travel facilities, each development in the transport system may equally be regarded as a response to the public need for the means of dispersion and freer movement of the population, a necessity made more and more

insistent by the increasing pressure upon the central and most congested areas for business and industrial purposes. The demand though very real was perforce only latent, until the means of movement were forthcoming, and it is greatly to the credit both of public authorities and transport experts that the anticipated needs of Londoners have been so accurately diagnosed, and on the whole so satisfactorily supplied.

There is however another side to the picture which is much less pleasant to contemplate. The possibilities of London transport, especially of road transport, are limited by the carrying capacity of London roads, and the problem of traffic congestion cannot be said to have found a solution, while that of traffic danger has lately become one of appalling dimensions.

On p. 314 will be found figures showing that in seven years the risk of being killed in a street accident in London has been doubled, while that of being injured has increased in even greater measure. This startling growth of street accidents, together with the noise and vibration due to motor traffic, are at present a considerable offset to the advantages of increased mobility, and are causing increasing anxiety to those who care for the amenities of London life.

XVI

The "disamenities" of traffic danger, noise and grime accentuate the importance of open spaces, parks and gardens where Londoners old and young may find a safe and quiet refuge.

The first and most essential of the functions of London open spaces is to meet so far as may be the wants of a growing and congested urban population in respect of a supply of fresh air. As is pointed out in Chapter IX, which deals with public amenities and the means of recreation, it is impossible to meet this want by increasing the open spaces within the built-up and crowded districts near the centre of London, and its satisfaction therefore depends essentially

on the development of means of locomotion, which may bring the open spaces, commons and forests on the outer fringe of Greater London within the range of movement of the inhabitants of the central area.

The problem of open spaces is therefore intimately connected with those of housing and transport. But parks, forests, commons and gardens do not only supply fresh air and the means of recreation; they also satisfy the hunger for beauty and harmony, which, though often unconscious, is latent in all but the depraved.

In the entire Survey Area the acreage of open spaces has grown from 6,589 in 1891 to 9,627 in 1928. This increase has more than kept pace with population, the area of open spaces having risen from 137 to 168 acres per 100,000 inhabitants. The growth has been greatest in the middle ring, for in the fully built-up districts near the centre there has been little room for expansion, while in the outer ring (beyond the County boundary) the population has grown much faster than open spaces —a result which is the more disquieting in that the main growth of houses and of population is now taking place in this part of the Survey Area. In forty years the population of the outer ring has more than doubled, while the area of open spaces has only increased by 60 per cent. The worst provided London borough in the matter of open spaces is Shoreditch with less than 9 acres per 100,000 inhabitants.

The uses to which the parks and gardens are put, whether for restful or active recreation, are described in detail on p. 278. There has been a very remarkable development in recent years both of the demand for playing-fields and of the response which that demand has elicited, but it is abundantly evident that the demand has outgrown the possibilities of supply within the limits of the open spaces now available.

That the problem of London's playing-fields and open spaces cannot be solved by any increased provision within the Survey Area itself is proved conclusively by the figures given on p. 284. Within the Survey Area

there are altogether 13,000 acres of public open spaces and private playing-fields. The undeveloped area which remains, and which is physically suitable for games, is only 5,000 acres, and when it is remembered that a large proportion of this is certain to be absorbed by building, it will be seen how narrow a margin exists for any possible extension. Outside the Survey Area, but accessible to its inhabitants through improved means of transit, lie about 28,000 acres suitable for playing-fields, within the 10-miles radius, a great part of which moreover will, at the present rate of building, be covered within the next ten years. All these considerations point to the need for far-sighted and comprehensive planning, to meet London's growing needs in respect of healthy outdoor life.

Reference has been made above to *grime* as one of the disamenities of London. The question of atmospheric pollution is discussed on p. 302, where it is shown that over 30,000 tons of soot are deposited annually on the surface of the County of London. Though recent efforts to abate the evil have not been without effect it still presents one of the gravest of unsolved problems in relation to London amenities.

XVII

We have now passed in rapid review some of the principal changes which have taken place since the time of Charles Booth's Survey in the conditions of physical welfare and environment of the London working population—in their command over necessaries and luxuries, in the leisure that remains to them when the day's work is done, in the dwellings which they inhabit, the transport agencies which have widened their range of mobility, the open spaces to which they have access. The question naturally suggests itself, how far all these and other changes that have taken place in the conditions of London life and labour have affected the physical health of the community.

The health of a people is perhaps the best single test of its physical well-being. Certainly good health is one of the most potent material factors in happiness—very much more so than the possession of wealth. Few will question the soundness of Charles Booth's judgment that in an analysis of the elements of happiness "neither poverty nor wealth has much part." [1] Health however stands on a different footing, and it holds the first place among the conditions of physical environment by which the well-being of the people is affected.

In Chapter VII the changes which have taken place in the health conditions of London are discussed by Sir William Hamer with special reference to the connection between poverty and disease. The outstanding fact is that the London death-rate in 1924–28 (when corrected for abnormal age- and sex-distribution) is less than two-thirds of the death-rate in 1890–94. The meaning and causes of this great reduction of mortality, or (to look at it from another point of view) of this lengthening of human life, form the subject of Sir William Hamer's chapter. In order to show the whole course of the changes which have taken place in the health of London he has found it necessary to take an earlier period than that of Charles Booth's Survey as the starting-point of comparisons. For this purpose the year 1841 has been chosen, from which year onward a continuous series of London death-rates is available.

In 1841 the London death-rate was 28 per thousand —more than double its present rate. In the half-century which followed (when war was being chiefly waged against the so-called "filth" and "zymotic" diseases), the death-rate was reduced to 20.

It was during this half-century that what has sometimes been termed the "sanitary idea" emerged, finding its expression in improved housing, drainage, water supply, and similar measures, as contrasted with the purely curative agencies (hospitals, dispensaries and nursing

[1] See Series I, Vol. I, p. 131.

organisations), the foundation of which characterised the previous epoch.

It was just at the close of this period that Charles Booth's Survey began, and the characteristic mark of the forty years which have elapsed since that survey has been the initiation and development of organised social health services, ranging from the medical inspection of school children to such public services as Health Insurance, pensions, school clinics, maternity and infant welfare centres, and schemes for the treatment of special diseases. The result of these and other causes has been that the death-rate (corrected for age-distribution) has further fallen from 20 to 13.

Sir William Hamer passes in review each of the main groups of diseases which contribute to the death-rate, and is careful to separate changes due to modified nomenclature and classification from those which represent a real rise or fall in health conditions.

The conclusion is drawn that the great success which has attended the organised efforts for the improvement of London health must be ascribed in large measure to the fact that during the last forty years the full effects of the Education Act of 1870 have been manifested, in the emergence of a generation of parents who have themselves passed through the schools. A striking fall of infant and child mortality came about "as soon as a generation which had passed through the primary schools had become parents of a new generation." [1] Moreover, with the substitution of an educated for an illiterate community "a public opinion has grown up which now supports instead of thwarting the efforts of the sanitary reformer." [2] It would be natural to expect that the results of organised social services in reducing death-rates would be more conspicuous in the case of children and old people than in that of persons at intermediate ages, and a study of the graphs confirms this expectation. It is not however necessary to rely solely on death-rates for the later period, since for the past twenty

[1] See p. 225. [2] *Ibid.*

or more years we have also the results of school medical inspections. In Sir William Hamer's opinion these results so far as they go generally confirm the conclusions suggested by a study of death-rates.

XVIII

The tribute borne in the preceding section to the predominant influence of education, and especially of the growth of a generation of literate parents, on the improvement of the general health in London, and in particular on the success of hygienic measures requiring the active co-operation of the public, is only one, though perhaps the most striking, illustration of the intimate connection between the growth of education and of social and economic welfare.

The transformation of an illiterate into a literate community means not only the growth of a public opinion which supports instead of obstructing the sanitary reformer, or the disappearance of the early difficulties of enforcing school attendance. It also means a growing appreciation of the value of education, not merely as a foundation for the more intelligent pursuit of industrial and other occupations, but, what is still more important, as the master-key to all forms of self-culture.

These considerations give added importance to the analysis attempted in Chapter VIII of the changes which have taken place in London Education during the past forty years, though this analysis is necessarily limited to changes that can be measured by statistical methods.

The period of the Booth Survey stands midway between the present time and the passage of the Education Act of 1870, which established universal compulsory education. It is therefore most convenient to take the years immediately following the passage of this Act as the starting-point of comparisons.

At that time nearly a third of the children of elementary school age and class were entirely without school provision, while an equal number were in schools not counted by the London School Board as "efficient,"

leaving less than two-fifths of the children on the rolls of "efficient" schools.

By 1891 (when Charles Booth's Survey was in its early stages) the proportion of children in efficient schools had risen to four-fifths, i.e. double the 1871 percentage. Within the limits of compulsory attendance (i.e. between 5 and 14) the percentage on the rolls in 1891 was 92, and it has since risen to between 98 and 99. It is obvious that the problem of securing attendance at primary schools has been solved.

The progress made in transforming the adult population of London into a literate community was of course more gradual. It is estimated, on the basis of calculations explained on p. 265, that in 1891 nearly half the parents of school children in London had probably received no school education. By 1921 this proportion had fallen to one-tenth, and at the present time the uneducated residue is less than 5 per cent., including all those who escaped education in their childhood whether through imperfect machinery for compulsion, or physical or mental defects or other causes. In effect this means that the problem of making the population of London a literate community has likewise been solved.

Meanwhile there has been a marked increase in regularity of attendance and also in the length of the period of compulsion. Even more important has been the steady improvement in the standard of teaching, of which perhaps the most significant index is the rise in the number of teachers per 1,000 pupils from 16 in Charles Booth's time to 28 to-day. All these figures, together with other changes which do not lend themselves to statistical measurement, point to a great rise of educational efficiency in the elementary schools since they were investigated forty years ago.

But the London elementary schools, besides giving the rudiments of education to all, fulfil another essential function by providing the groundwork for those who desire to continue their school life, whether full time or part time, beyond the compulsory age limit. Chapter

VIII analyses the various means by which children from elementary schools may now continue their education, and shows the extent to which progress has been made in extending and improving such means.

The process of establishing an organic connection between elementary and higher schools in London was in its infancy in 1890. Less than 1,000 children from elementary schools then held scholarships in secondary schools, and the holders were mostly children of fairly prosperous parents. At present the total is at least eight times as great, and no less than half the pupils of London secondary schools must have passed through elementary schools.

Much effort has also been devoted in recent years to opening up alternative avenues for continued education (e.g. through Central and Trade schools) of types more closely adapted to the practical needs of future manual workers. On the whole however the problem of continued education is still a half-solved problem needing further exploration, and the character of the eventual solution may be greatly affected by the raising of the limit of compulsory school age.

It is however a very narrow view of the function of education in relation to life and labour in London, which regards it solely as a preparation for the practical work of life.

One indication of the expansion of cultural opportunities in London which is a natural sequel to the growth of education is the development of Free Libraries. This is dealt with on p. 286, where it is shown that in the past thirty years the number of public libraries in the Survey Area has more than doubled and the numbers of borrowers, and of books borrowed, have both more than trebled in proportion to the population. This is a great advance, though even now the 660,000 borrowers from public libraries in the Survey Area form but a small minority of the total population who have received a school education.

XIX

If the great increase in the use made of public libraries furnishes a partial answer to the question of the use made of the extra daily hour of leisure which the London worker has gained, another and very considerable part of this leisure is certainly accounted for by the immense development of the means of cheap indoor amusement through the invention of the cinema. On p. 290 the changes in the means of indoor entertainment are traced, and it is shown that since the introduction of the cinema (or as it was at first termed the "bioscope") in or about 1905, this form of entertainment has come to overshadow the theatre and music hall, until at present the cinemas have a seating accommodation more than double that of theatres and music halls combined, while through their repeated entertainments they cater for an even larger proportion of persons than is represented by this figure.

In a group of six typical working-class London boroughs with a population of about a million it is found that in 1891 there were eighteen theatres and music halls. At present this number has shrunk to five, but their place has been much more than taken by fifty-nine cinemas. For details reference must be made to p. 291, but enough has been said to show that, whatever may be the present "cultural" value of the average entertainment, the cinema now plays a great part in the life of the great mass of the people of London, and that the public interest in all that concerns its right development and guidance as a popular mode of dramatic art is widespread and profound.

XX

This brief summary of some of the principal results which emerge from the investigations recorded in the following chapters would be incomplete without some attempt to take stock of what has been achieved and of what still remains to be explored. Such an endeavour may be useful not only as a warning against overstatement but also as an encouragement for further research.

The object of this preliminary volume is not to set out the results of the New Survey, but to establish as many links as possible between the present and the past. Each separate chain of figures, relating to some particular social or economic factor, whether it be earnings, cost of living, employment, housing, recreation, health, education, pauperism or crime, is, when taken singly, subject to serious qualifications and criticisms. Collectively however they afford a strong presumption as to the general trend of average conditions of life and labour in London since Charles Booth undertook his inquiry.

But while these preliminary researches lay a firm foundation for the actual work of the New Survey, they do not by any means dispense with its necessity or lessen its importance.

There is no need to belittle the value of the results already achieved. To explore the general trend of conditions during a period of forty years is a task of a kind which Charles Booth himself never attempted, and which, while recognising its importance, he considered to be beyond the scope of his own work.[1] To us, who look to the New Survey primarily as a means of comparisons, the ascertainment of the general flow of tendencies is at least as important as the examination of a cross-section of the stream.

It must always be remembered however that the method of index-numbers, while of the greatest value for the purpose of measuring the general movement of *average* conditions, is less suited, unless supplemented by other lines of research, to show the internal movements among the different elements out of which the average is built up.

It is a very great gain that, within comparatively narrow limits of error, we can now for the first time say definitely what the movements of average rates of wages, earnings, hours of labour and cost of living in London have been over a long period of years. But this ascertainment cannot of itself furnish a conclusive answer to the prim-

[1] Series III, Vol. I, p. 5.

ary inquiry with which the New Survey is concerned, viz. what has been the change in the numerical relation of poverty to well-being.

It has indeed been possible, by tracing a number of converging lines of economic and social development, and by comparing and combining the results, to create a strong presumption, but any such presumption needs to be tested and confirmed by actual survey.

For example, as has been already pointed out, we need to know whether an ascertained upward movement in "average" economic conditions is the result of a widespread improvement in which practically all have shared, or whether it represents a net balance resulting from conflicting movements in opposite directions, affecting different grades of the population in different ways. The progress of "average" betterment is not, of itself, inconsistent with a growth of the poverty-stricken element of the population, side by side with a more than "average" improvement in the conditions of the classes furthest removed from the poverty line.

Again, the average improvement in health conditions revealed by the statistics of mortality, though decisive of the general progress of the health of the community, does not of itself prove that the less healthy element of the population may not have increased, perhaps as the direct result of the greater care and skill bestowed on keeping alive those who under harder conditions would have been eliminated as unfit.

These are merely two examples of the limitations within which inferences as to changes in the numerical relation of poverty to well-being can legitimately be based on statistics of average trends.

Considerations such as these have of course been carefully kept in mind in the preceding pages, and such existing data as are relevant thereto have been assembled and analysed. The matter is only mentioned here to illustrate the necessity of regarding any inferences founded solely on general statistical indices as provisional and tentative, and to emphasise the need of keeping an open

mind in approaching the examination of the evidence which will shortly be available as the result of the survey itself.

There is moreover another limitation of no less importance which must always be borne in mind.

The economic and social progress of the community as a whole and of the various strata of which it is composed, is the resultant of a large number of factors, only a few of which lend themselves to statistical measurement. It is possible to show how far the average London worker has increased his command over the necessaries and luxuries which enter into his consumption, and has shortened the duration of the toil by which this purchasing power has been earned. But no statistical index can evaluate the social betterment actually accruing from these advantages, since this depends on the extent to which the additional purchasing power and leisure are used to build up a fuller, healthier and more civilised life, or are frittered away in transient or (in the strict sense) "unedifying" enjoyments or pursuits.

Again, the statistics of the amazing growth of the means of transport and of the habit of travel show how the range of mobility of the mass of the population of London has been widened, and give some indication of the increased possibilities of healthy recreation and culture which have thus been opened up. But they do not profess to measure the mental, moral and physical gain and loss which, in fact, flow from this increased mobility.

We here reach phases of the problem of London Life and Labour which are of the deepest interest and importance, but for the exploration of which our statistical measuring rod fails us. In such matters we shall need to call in the aid of other methods of inquiry, criticism and appreciation.

Lastly it should be emphasised that the primary object of the present Volume is to ascertain the general trend of economic and social welfare during the past forty

years, and that it is only concerned to a minor degree with analysing the causes and influences by which that development has been stimulated, hindered or deflected. It is of course impossible to present a coherent picture of development without touching on causation, and many references will be found in the following chapters to the agencies and forces which have affected the changes recorded. But these references are only incidental and illustrative, and the volume makes no claim to be a history of the growth of institutions, or to estimate the respective parts played by public policy and individual effort in modifying the economic and social conditions of London life and labour, or the magnitude and incidence of the cost at which such modifications have been brought about, or the possible repercussion of this incidence on the basic conditions of future prosperity.

CHAPTER II

AREA AND POPULATION[1]

THE existing administrative area of the County of London was constituted in 1888, and from 1899 consisted of the City of London and 28 Metropolitan Boroughs. The boroughs are not always co-extensive with the Registration Districts which Charles Booth used, nor with any earlier defined areas, but it is possible to trace the population within existing boundaries with sufficient accuracy at least as far back as 1851. The County of London is not an economic unit, and the County boundary has had less significance from all aspects except the administrative in each successive decade since its establishment. Charles Booth confined his work to the County, only remarking (Series I, Vol. II, p. 32)

"while South and North London have completed their muster (of the poor), East London has still a battalion in reserve. Stratford, West Ham, Leyton and Walthamstow, though not within the Registrar-General's boundaries, are geographically, and in some sense socially, as much part of East London as Greenwich and Woolwich are of South London. They contain some 300,000 inhabitants who are perhaps no less poor on the average than the 700,000 already counted (in East London)."

It is impossible to define an area which is strictly comparable with that studied by Charles Booth. The resident population of the central districts of London has

[1] Reference should be made to the Density Maps of London following p. 70 while reading this chapter. In 1921 the central boroughs are less densely covered than in 1891, the outer boroughs are filled up, and there is an intermediate ring where no change is visible.

diminished considerably since 1891, and only in some of the boroughs that reach the outskirts of the County has there been a continuous growth. In total the population enumerated in the County has fallen since 1901. But, though complete statistics do not exist, there is no doubt that the population *working* within the County has increased in every decade, and the successors of the workers described by Charles Booth are recorded in areas outside the County, into which they travel. But the work-places have moved as well as the work-people, and it would not be unreasonable to include the factories in the Essex boroughs and along the railways traversing Middlesex in a London which is comparable with the County in 1891.

For the first part of the New Survey, nine districts (East and West Ham, Barking, Leyton, Walthamstow, Tottenham, Hornsey, Willesden and Acton) are being investigated on the same general plan as the City and Metropolitan Boroughs ;[1] for some purposes Penge is also included. The delimitation is arbitrary, but it is considered that only a small number of manual workers (as distinguished from salaried persons and the directing and professional classes) come into London from farther afield, and even if we tried to include all outlying districts from which a substantial proportion come to London for work, we should reach the other horn of dilemma, and have to stretch London to cover the local industries that have a nearly independent existence and a completely different environment.

When, however, we depend on published statistics and not on the results of new investigation, we can extend our area as far as we please, and it is well to have a general setting for our Survey, both in place and time. Table I (p. 72) summarises the changes of population

[1] Of the nine areas outside the County of London which are included in the New Survey, seven are Boroughs or County Boroughs, and two (Tottenham and Barking) are Urban Districts. For brevity, however, these areas are referred to collectively as the extra-Metropolitan, or outer, Boroughs.

during seventy years at various distances and in different directions from the centre. In it the smallest areas for which information is available have been grouped as nearly as possible in their appropriate zones, and sufficient comparability with the earlier censuses has been preserved. By extending the radius to include other districts beyond 15 miles whence a considerable number of persons come daily to London, perhaps 400,000 would be added, the recent rate of increase being about the same as in the 12–15 miles ring. In 1921 in particular, when the Census was taken in June instead of in April as has been customary, statistics of the seaside resorts near London suggest that some 50,000 should be added in that year to the population of London.

"Greater London," as defined in the Census, contains some districts in Middlesex and Surrey beyond the 15-mile radius and in other regions does not reach it. Its population is very nearly the same as that tabulated on p. 73.

It is noticeable that the County of London has contained a falling proportion of the population of England and Wales since 1881, and that Greater London showed no increase between 1911 and 1921 in relation to the population of the country as a whole. The slight apparent decrease in the proportion in 1921, however, may be due to the changed date of the Census just named.

When Table I is examined in more detail, it is seen that extension into the districts of Essex and Middlesex which have now become populous boroughs was the main feature of the expansion in the decades before 1891. In the following twenty years there was a noticeable increase in Middlesex and Surrey, though in fact considerable areas due N.W. and S.W. from Charing Cross were not filled beyond seven miles. From 1911 to 1921 the most rapid increases were again in Surrey within 10 miles, and generally in the zone between 12 and 15 miles. Since 1921 observation suggests that the formerly sparsely populated

districts between seven and ten miles, beyond Willesden and beyond Mitcham, have developed most rapidly, but this impression will be examined further in the light of Table III (p. 77).

This transference of growth from near the County boundary to a more distant ring is the extension of a movement that is very evident when we study the population of the Metropolitan Boroughs separately. The necessary statistics are given in Table II (p. 72).[1] The populations of the City,[2] Finsbury, Holborn and Westminster diminished before 1891 and have decreased further since. Between 1891 and 1921 the decrease spread to a further ring, including Southwark, Bermondsey, Shoreditch, Bethnal Green, Stepney, St. Pancras, St. Marylebone and Chelsea. Between 1911 and 1921 there was no significant change; that is the maximum was apparently reached in Poplar, Hackney, Islington, Hampstead, Paddington, Kensington. There remain the boroughs where population increased between 1911 and 1921, viz.: Stoke Newington, 3 per cent.; Hammersmith, 7 per cent.; Fulham, 3 per cent.; Wandsworth, 6 per cent.; Lambeth, 2 per cent.; Camberwell, 2 per cent.; Deptford, 3 per cent.; Lewisham, 8 per cent.; Greenwich, 5 per cent.; and Woolwich, 16 per cent. This list is nearly the same as that of Boroughs mainly outside the 4-mile radius. Only in the case of Woolwich does the increase in the ten years exceed 8 per cent., and this was in consequence of the dwellings erected for Arsenal workers during the War.

Since the Census of 1921 the Registrar-General has estimated the population of every important administra-

[1] Charles Booth made use of Registration Districts and worked in his earlier volumes on the Census of 1881. In Table II the Metropolitan Boroughs are shown; the boundaries have changed very little since 1891, and the Census tables show, with sufficient exactness, the population on the areas as defined in 1911 not only in 1891 but as far back as 1851. For the purposes of the New Survey a careful analysis has been made of the relation between Charles Booth's areas and the existing administrative areas for use whenever local comparisons call for it.

[2] In Tables relating to the statistics of the separate Metropolitan Boroughs, the City of London is included as though it were a Borough.

tive area by computing the excess of births over deaths and correcting by the changes in the Parliamentary Register and by general statistics of emigration. The results are given in the Tables.

Thus from Tables I and II we have:

	Acres (as in 1911). 000's.	Population. 1921. 000's.	Population. 1928. 000's.	Percentage Increase or Decrease.
County of London .	75	4,485	4,469	— 0·4
Nine Extra Metropolitan Boroughs . .	31	1,197	1,220	+ 1·9
Total Survey Area .	106	5,682	5,689	+ 0·1
Rest of Greater London	337	1,798	2,175	+20·9
A. Greater London .	443	7,480	7,864	+ 5·1
B. England and Wales	32,559	37,885	39,482	+ 4·2
A as percentage of B .	1·4	19·7	19·9	—

The movements can, of course, be observed, either by the change of actual population as in Table II, or by the change in density, Table III, A, or by both sets of figures, Table III, B.

For the County as a whole the net change is small. As regards the different localities the movements already described have in most cases continued. In Lewisham, however, there has been a special development of new building in the southern part of the Borough.

In Table III, B, the estimated changes in the period 1921 to 1928 are summarised for all the Urban Districts outside the County of London that lie in any part of Middlesex or in other counties within 15 miles of Charing Cross. Nearly the whole population of "Greater London" is included in III, A and B, but the omitted Rural Districts account for as much as 80,000 acres, with a population of about 176,000.

In the Table the nine extra Metropolitan boroughs which are studied intensively in the "New Survey," also Croydon and Penge, are shown separately, and the re-

maining districts massed in each county. The figures given for Essex, however, do not include the newly constituted Urban district of Dagenham, which had a population of 67,500 in 1928.

The Table may be thus summarised:

	Population. 1921. 000's.	1928. 000's.	Percentage Increase.
The Nine Boroughs of the Survey . .	1,197	1,220	2
Penge . . .	26	27	4
Croydon . . .	191	217	13½
Other Urban Districts	1,537	1,821	18½

An increase of 12 per cent. or more is found in each of the lines of Table III, A, other than those relating to the nine Boroughs and Penge, while none of these ten shows any substantial increase.

It is evident that the general movement towards growth at the circumference already described for earlier years has continued since 1921.

In Table III, A and B, the density of the population, measured by the number of enumerated persons per acre, is shown for each metropolitan borough and for the more populous districts in Greater London. The distribution within the County is more uniform in 1928 and 1921 than in 1851 or in 1891; all the metropolitan boroughs in which the density was over 150 at either date are less populated in 1921. In spite of this fall, however, five boroughs near the centre in 1921 and four in 1928 had a density exceeding 125. Meanwhile in the metropolitan boroughs most distant from the centre the density has increased, till only in Hampstead, Wandsworth, Lewisham, Greenwich and Woolwich, where there are large areas of parks, fields, etc., was it less than 50 in 1921 or 1928. The average over all the County was 60 at both dates.

At the same time, in the neighbouring boroughs in Essex and to the North the densities have increased till they approach that of some of the districts not far from

the centre and exceed the density of many of the larger provincial towns.[1]

It must be remembered that there is great variety within the boroughs, e.g. in Camberwell, or, especially, Woolwich and Wandsworth, and that this crude method cannot be more than suggestive. Unfortunately it is generally not possible to take smaller units of area for these Tables, but in the density maps attention is paid to civil parishes, and to actual open spaces and built-up areas.

When we examine the divisions of the population by sex (Table IV) and by age (Table V), we find great variation between the districts and considerable changes over thirty years. The County of London as a whole contained a larger proportion of females to males than did England and Wales, both in 1891 and 1921. In 1921 the proportion was greatest in Kensington, Hampstead, St. Marylebone, Chelsea, Paddington and Westminster, where there were more than 130 females to 100 males (the comparable figure being 110 in England and Wales as a whole). In the City, in the Eastern Boroughs including West and East Ham and Barking and in the South Thames Boroughs from Southwark to Woolwich the proportion was 108 or less, being as low as 101 in Woolwich. Of the remaining boroughs the rule generally holds that the further from the centre the greater is the proportion of women. Hornsey ranks with Westminster, and the remaining extra-metropolitan boroughs listed are in the middle range.

The order in 1891 is nearly the same; but Stoke Newington, Hammersmith, Paddington, Acton, Lewisham and Penge, show a higher proportion of females in

[1] In 1921 the population per acre was as follows in selected administrative groups and cities :—

All England and Wales	1·0	Nottingham	24
All County Boroughs	19·7	Birmingham	21
County of London	60	Greater London, excluding County	9
Liverpool	38	All Rural Districts	0·24
Manchester	34		
Newcastle	32·5		

1891 than in 1921, while in Westminster, Chelsea and St. Marylebone the proportion has risen markedly in the thirty years.

The division by age, to which we next turn, shows similar geographical lines. In the County of London as a whole, compared with England and Wales, there was a deficit of children under 15, and of males from 15 to 20. There was a considerable excess for both sexes in the age-group 20 to 45. In the group 45 to 65 years there was a deficiency of males in 1891 and a slight excess in 1921, with a slight excess of females at both dates. Above 65 there is a deficiency of both sexes, less marked in 1921 than in 1911.

The detailed analysis of sex- and age-distribution by localities is more appropriate in connection with the study of occupations (see Chapter X). But it may be noticed that the industrial boroughs differ from the residential boroughs as a whole. In the East and South of the County and in the Eastern adjacent boroughs the proportion of children under 10 is not less than in England and Wales, and in the age-group 10 to 15 is greater than in the rest of London and adjacent boroughs. In the North and West there was a considerable deficiency of children in 1921, but the proportion of aged was as great as in England and Wales as a whole. Cases at or near the extremes are as follows:

	Per 1,000 inhabitants, 1921.					
	Under 15.	15 to 65.		65 and over.		
	M. & F.	Males.	Females.	Males.	Females.	Total.
Hampstead . .	182	272	477	25	44	1,000
Westminster . .	144	338	460	24	34	1,000
Shoreditch . .	328	294	327	24	27	1,000
Southwark . .	304	310	335	24	27	1,000
England and Wales .	277	312	351	26	34	1,000

In London as in England and Wales and many other countries, both birth and death-rates have fallen since 1891.

Year.	Birth-rates (crude). London.	Birth-rates (crude). England and Wales.	Death-rates (crude). London.	Death-rates (crude). England and Wales.	Rate of Annual Natural Increase. London.	Rate of Annual Natural Increase. England and Wales.
1891 . . .	31·9	31·4	21·1	20·2	10·8	11·2
1921 . . .	22·1	22·4	12·5	12·1	9·6	10·3
1927 . . .	16·1	16·6	12·1	12·3	4·0	4·3
1928 . . .	16·2	16·7	12·1	11·7	4·1	5·0

The "crude" rates are obtained by dividing the number of births or deaths in a year by the estimated population (divided by 1,000) at mid-year. The "natural increase" is that arising from the excess of births over deaths. Apart from the net influx from without, London would have grown in population more slowly than the country as a whole.

To compare the actual birth and death-rates of London with those of England and Wales from the point of view of fertility or mortality, it is necessary to allow for the differences of the distribution of the population by age and by sex. Owing to the relatively small proportion of young and of old, whose death-rate is high, and the large proportion at working-ages, where the death-rate is relatively low, London would have a lower death-rate than England and Wales if liability to death was the same at the same ages. In the "standardised" death-rates the difference in age- and sex-distribution is eliminated. The data are not available for making the computation every year, but the difference is sufficiently shown in the figures of two decades.[1]

Annual Death-rates.

Period.	Crude. London	Crude. England and Wales.	Standardised. London.	Standardised. England and Wales.
1891 to 1900 .	19·2	18·2	20·1	18·2
1901 to 1910 .	15·8	15·4	16·2	15·2

Thus both the crude and the standardised rates have

[1] See also Chapter on Health, pp. 200–244.

been greater in London than in the country as a whole, but the excess is greater in the standardised rates.

There is no such definite way of comparing birth-rates in populations of different age- and sex-distributions, but a convenient method of avoiding some of the factors which prevent comparability is simply to reckon the number of births in relation to the number of women, married or unmarried, between the ages 15 and 45.

NUMBER OF BIRTHS PER 1,000 WOMEN AGED 15 TO 45.

Year.	London.	England and Wales.
1891	121	132
1921	83	89

It is seen that the birth-rate so reckoned has fallen in about the same proportion in London and in the country as a whole. But, whereas the crude birth-rate was greater in London than in England and Wales in 1891 and not much less in 1921, the second method shows that if we compare like with like, and consequently allow for the greater proportion of young women in London, the London rate is definitely lower than elsewhere.

BIRTHPLACES OF THE LONDON POPULATION

During the past half-century the London-born element in the population of the County of London has slowly but steadily increased at the expense of the section born in other parts of the country or beyond the seas. In this matter we have a fairly comparable series of figures of birthplaces for each census year from 1881 to 1921, and the information already obtained in connection with the present survey enables us to say that the process has continued up to date. The figures for 1881 were not published by the Registrar-General but were specially extracted for the purpose of Charles Booth's original survey. Similarly the figures for the year 1921 were omitted from the published census volumes, and had to be extracted specially for the purpose of the present survey. For the intermediate years 1891, 1901, and

1911, figures of birthplaces for the whole county are available, and for 1911 the published particulars distinguish the boroughs separately. The result is that with the aid of the special inquiries relating to 1881 and 1921 we can compile a continuous chain of statistics of birthplaces for the whole county, while for three of the census years, 1881, 1911, and 1921, it is possible to distinguish the separate boroughs.

When we travel beyond the limits of the County the statistics change their meaning, for in an analysis of the population (say) of West Ham the category "London born" has no longer the same significance. Consequently for the purpose of comparative Tables it has been thought best to limit the field to the Administrative County.

The information available is given in the Tables on pp. 81–3. From Table VI it appears that the percentage of the total population who were Londoners by birth rose from 63·0 in 1881 to 65·3 in 1891, 66·5 in 1901, 69·0 in 1911 and 70·7 in 1921. The percentage born in other parts of the United Kingdom declined from 34·3 in 1881 to 31·5 in 1891, 29·2 in 1901, 26·3 in 1911 and 25·0 in 1921. The percentage born abroad rose from 2·7 in 1881 to 3·2 in 1891, 4·3 in 1901 and 4·7 in 1911, after which it declined slightly to 4·3 in 1921.

It will be seen that the last-named element (i.e. born abroad) has throughout the period been a small proportion of the whole. Its increase between 1881 and 1911 is mainly due to the influx of Jews from Eastern Europe into East London, while the check to the increase between 1911 and 1921 was undoubtedly connected with the war.

The figures showing the percentage of the London population who were born in other parts of the United Kingdom give evidence of a steady diminution of the influx into the County of London, this percentage having decreased by nearly a quarter in forty years. There was a decline in the proportion of "country-born" in every part of London with the exception of the City and West-

minster, neither of which could be described as a working-class area. The magnitude of the decrease in some of the poorer districts can be seen from the following figures:

	Percentage born in other parts of United Kingdom.		
	1881.	1911.	1921.
Bermondsey . . .	26·2	14·2	11·5
Bethnal Green . .	15·5	8·5	6·9
Deptford . . .	33·3	21·5	19·8
Poplar	31·9	18·0	14·9
Shoreditch . . .	22·4	11·0	9·3
Southwark . . .	29·0	18·2	15·5
Stepney . . .	22·9	10·5	8·6
Mean of above .	25·4	14·2	12·2

The above figures show that the "country-born" element has throughout the period of forty years been lowest in the poorest areas, and that it has diminished during that period much more rapidly in the poorer boroughs than in London as a whole. Thus while in 1881 the "country-born" percentage in the seven poor boroughs was more than two-thirds that for the whole of London, in 1921 it had fallen to one-half. The greater part of the decline took place in the period 1881-1911.

It is of interest to compare the movement in the more central and outlying parts of London. This is done in the following Table, in which the "Inner" and "Middle" Ring have the same meaning as in the chapter on Overcrowding. (See page 170.)

	Percentage of Population born in other parts of the United Kingdom.		
	1881.	1911.	1921.
Inner Ring . . .	29·8	20·7	19·4
Middle Ring . .	37·8	29·3	27·9
Whole of London County.	34·1	26·3	24·9

The foreign-born[1] element in East London consists, as in Charles Booth's time, mainly of immigrants from Eastern Europe. The four boroughs of Stepney, Beth-

[1] i.e. persons born outside the British Empire.

nal Green, Hackney and Stoke Newington accounted in 1921 for nearly one-third of the foreign-born population of London, viz. 60,478 compared with 18,727 in 1881. Of the 1921 total nearly 50,000 were born in Russia or Poland. It is noteworthy that the total number of foreign-born persons in these boroughs declined by over 14,000 between 1911 and 1921, doubtless owing to conditions arising out of the war.

The social and economic character and effects of the influx of population were analysed at length in the earliest volumes of the Booth Survey, and a similar detailed analysis is now being made in connection with the present survey. The results of this investigation will be published in a later volume.

NOTE ON DENSITY MAPS

In the preceding maps the density of population is indicated by dots, each representing 500 persons.

In order to get as close as possible to the actual distribution of the population, it was felt desirable to take the smallest practicable unit of area for which population was given at each date. In 1891 this unit was the registration sub-district, in 1921 the Borough ward. It will be seen that generally speaking the wards comprise smaller areas than the registration sub-districts and this involved the drawing of a greater number of lines in the 1921 map, which unfortunately has the effect of introducing more black on to the map, and obscuring to some extent the real decrease of density near the centre.

A map indicating the registration sub-districts in 1891 proved unobtainable, but the map in the Booth Survey, Series I, Vol. 3, following p. 148 showing these districts for 1881 was adjusted for 1891 by information kindly supplied at the Registrar-General's office.

The appropriate number of dots each representing 500 of population was then located within the registration sub-district (1891) and ward (1921) boundaries in accordance with the indications of ordnance survey maps about these dates, as to the location of dwelling houses.

The preparation of the maps was carried out by the Geographical Department of the London School of Economics and Political Science under the direction of Professor Rodwell Jones.

CHAPTER II: TABLES

TABLE I. Changes of Population, Greater London, 1851–1921.

District.	Area Acres (approx.).	Population.							Population.	
		1851. 000's.	1881. 000's.	1891. 000's.	1901. 000's.	1911. 000's.	1921. 000's.	1928. 000's.	1921 as percentage of 1891.	1921 as percentage of 1911.
Present County of London :										
North of Thames . . .	31,651	1,746	2,565	2,704	2,786	2,678	2,586	2,545	99	97
South of Thames . . .	43,164	616	1,265	1,524	1,750	1,844	1,898	1,924	125	103
Total .	*74,815*	*2,363*	*3,830*	*4,228*	*4,536*	*4,522*	*4,485*	*4,469*	*106*	*99*
Within 10 miles of Charing Cross :										
North: Eight Boroughs [1] . .	26,300	51	292	545	877	1,087	1,140	—	209	105
Other Districts:										
Essex	18,947	13	36	46	90	150	167	—	360	111
Middlesex and Herts . .	40,483	45	127	199	285	445	503	—	250	113
Total .	*85,730*	*109*	*455*	*790*	*1,252*	*1,682*	*1,810*	—	*230*	*108*
South: Surrey	34,559	50	150	201	264	367	421	—	210	115
Kent	9,998	7	29	64	77	89	97	—	150	109
Total .	*44,557*	*57*	*179*	*265*	*341*	*456*	*518*	—	*195*	*114*
From 10–12 miles :										
North: Essex	873	[2]	2	4	5	5	5	—	—	—
Middlesex and Herts .	41,135	36	82	106	145	208	234	—	220	112
Total .	*42,008*	*36*	*84*	*110*	*150*	*213*	*239*	—	*220*	*112*

South: Surrey	18,263	15	47	58	79	99	105	—	180	106
Kent	12,630	6	16	20	41	47	53	—	265	113
Total	*30,893*	*21*	*63*	*78*	*120*	*146*	*158*	—	*200*	*108*
From 12–15 miles:										
North: Essex	34,551	16	24	28	35	42	46	—	165	110
Middlesex and Herts	65,361	25	36	42	60	77	89	—	210	115
Total	*99,912*	*41*	*60*	*70*	*95*	*119*	*135*	—	*195*	*113*
South: Surrey	33,229	14	28	35	46	66	71	—	200	108
Kent	20,648	13	22	27	32	36	45	—	170	125
Total	*53,877*	*27*	*50*	*62*	*78*	*102*	*116*	—	*185*	*114*
Summary:										
London	*74,800*	*2,363*	*3,830*	*4,228*	*4,536*	*4,522*	*4,485*	*4,469*	*106*	*99*
Outside to 10 miles	*130,300*	*164*	*634*	*1,055*	*1,593*	*2,138*	*2,328*	—	*221*	*109*
10–12 miles	*72,900*	*57*	*147*	*187*	*270*	*359*	*397*	—	*212*	*111*
12–15 miles	*153,800*	*68*	*110*	*132*	*173*	*221*	*251*	—	*190*	*114*
Total	*431,800*	*2,653*	*4,723*	*5,603*	*6,571*	*7,240*	*7,459*	—	*133*	*103*
England and Wales	—	17,928	25,974	29,002	33,528	36,070	37,885	39,482	131	105
Total extended London as percentage of England and Wales	—	14·8	18·2	19·3	19·6	20·0	19·7	19·9 (approx.)	—	—
"Greater London"	443,500	—	4,767	5,633	6,581	7,251	7,480	7,864	133	103
Greater London less County	368,700	—	937	1,405	2,045	2,729	2,995	3,395	213	110

[1] Viz., East Ham, West Ham, Leyton, Walthamstow, Tottenham, Hornsey, Willesden and Chiswick; these are the only Areas nearly contiguous with London with a density over 29 per acre.

[2] Probably under 500.

TABLE II

Changes of Population, 1851–1928.

A. London Boroughs.

Borough.	Area as in 1911 (Acres.)	Population. 1851. 000's.	1891. 000's.	1901. 000's.	1911. 000's.	1921. 000's.	1928. 000's.	Population. 1921 as percentage of 1891.	1928 as percentage of 1921.
City	675	128	38	27	20	14	11	37	79
Finsbury	587	125	110	101	88	76	72	69	95
Holborn	405	96	67	59	49	43	39	64	91
	1,667	*349*	*214*	*187*	*157*	*133*	*122*	*62*	*92*
Shoreditch	658	109	124	119	111	104	101	84	97
Bethnal Green	759	90	129	130	128	117	112	91	96
Stepney	1,766	239	285	299	280	250	245	88	98
Poplar	2,328	47	167	169	162	163	162	97	99
	5,511	*485*	*706*	*716*	*682*	*634*	*620*	*90*	*98*
Hackney	3 288	54	200	219	223	222	217	111	98
Stoke Newington	863	6	48	51	51	52	51	109	98
	4,151	*60*	*248*	*271*	*273*	*274*	*268*	*111*	*98*
Islington	3,091	95	319	335	327	330	325	103	98
St. Pancras	2,694	167	235	235	218	211	206	90	98
St. Marylebone	1,473	158	143	133	118	104	104	73	100
Hampstead	2,265	12	68	82	85	86	86	126	100
	9,523	*432*	*766*	*786*	*749*	*731*	*721*	*95*	*99*
Westminster	2,503	244	202	183	160	141	133	70	94
Paddington	1,356	48	136	144	143	144	145	106	100
Chelsea	660	54	73	74	66	64	64	87	100
Kensington	2,291	44	170	177	172	176	178	103	100
Fulham	1,703	12	92	137	153	158	155	167	98
Hammersmith	2,286	18	97	112	122	130	136	134	105
	10,799	*420*	*770*	*827*	*816*	*813*	*812*	*106*	*100*

Southwark	1,131	152	202	206	192	184	181	91	98
Lambeth	4,080	139	278	302	298	303	298	109	98
Battersea	2,160	11	150	169	168	168	164	112	98
Wandsworth	9,107	40	156	232	311	329	347	212	105
	16,478	*342*	*787*	*909*	*969*	*984*	*990*	*125*	*101*
Bermondsey	1,500	85	136	131	126	119	115	88	97
Deptford	1,563	25	102	110	109	112	112	110	100
Camberwell	4,480	55	234	259	261	267	260	114	97
Lewisham	7,014	19	89	127	161	174	199	196	114
Greenwich	3,852	47	78	96	96	101	101	128	100
Woolwich	8,277	43	99	117	121	140	147	142	105
	26,686	*274*	*738*	*841*	*875*	*914*	*934*	*125*	*102*
Total (County of London)	*74,815*	*2,363*	*4,228*	*4,536*	*4,522*	*4,485*	*4,469*	*106*	*99*

B. Outer Areas.

West Ham	4,683	—	205	267	289	301	307	147	102
East Ham	3,324	—	33	96	133	143	146	437	102
Barking	3,805	—	14	21	31	36	41	257	114
Leyton	2,594	—	63	99	125	128	130	204	102
Walthamstow	4,343	—	46	95	125	127	122	275	96
Tottenham	3,014	—	72	103	137	147	154	206	105
Hornsey	2,875	—	45	72	85	88	87	198	100
Willesden	4,384	—	61	115	154	166	168	271	101
Acton	2,305	—	24	38	57	61	65	253	106
Total (Outer Areas)	*31,227*	—	*563*	*906*	*1,137*	*1,197*	*1,220*	*212*	*102*
Total Survey Area	*106,142*	—	*4,791*	*5,442*	*5,658*	*5,682*	*5,689*	*119*	*100*

TABLE III

DENSITY OF POPULATION OF LONDON AND NEIGHBOURING AREAS: NUMBER OF PERSONS PER ACRE.

A. Metropolitan Boroughs: Density.

	1851.	1891.	1921.	1928.
City	190	57	21	17
Finsbury	212	188	129	123
Holborn	240	167	107	97
	209	*129*	*80*	*74*
Shoreditch	166	185	158	153
Bethnal Green	117	170	154	148
Stepney	135	160	141	139
Poplar	20	72	70	69
	88	*128*	*115*	*113*
Hackney	17	61	67	66
Stoke Newington	7	57	60	59
	15	*60*	*67*	*65*
Islington	31	103	107	105
St. Pancras	62	87	78	76
St. Marylebone	108	97	71	71
Hampstead	5	30	38	38
	45	*80*	*77*	*76*
Westminster	96	80	57	53
Paddington	35	100	106	107
Chelsea	80	110	97	96
Kensington	19	75	77	78
Fulham	7	54	93	91
Hammersmith	35	42	57	60
	38	*71*	*75*	*75*
Southwark	134	180	163	160
Lambeth	34	68	74	73
Battersea	5	70	78	76
Wandsworth	4	17	36	38
	21	*48*	*60*	*60*
Bermondsey	57	91	80	77
Deptford	17	65	72	72
Camberwell	12	52	60	58
Lewisham	3	13	25	28
Greenwich	13	20	26	26
Woolwich	5	12	17	17
	10	*28*	*34*	*35*
County of London	*32*	*57*	*60*	*60*

TABLE III

DENSITY OF POPULATION OF LONDON AND NEIGHBOURING AREAS: NUMBER OF PERSONS PER ACRE.

B. Neighbouring Areas: Population and Density.

	Area.	Population in 000's.		Persons per acre.	
		1921.	1928.	1921.	1928.
ESSEX:					
East Ham . . .	3,326	143	146	43	44
West Ham . . .	4,683	301	307	64	66
Leyton	2,594	128	130	49	50
Walthamstow . .	4,343	127	122	29	28
Barking	3,803	36	41	9	11
Other towns within 15 miles of Charing Cross [1] . . .	36,625	168	214	5	6
MIDDLESEX:					
Tottenham . . .	3,013	147	154	48	51
Hornsey	2,808	88	87	31	31
Willesden	4,384	166	168	38	38
Acton	2,305	61	65	27	28
Other towns within 12 miles [2] . . .	67,187	668	774	10	12
Rest of County . .	68,995	124	173	2	3
SURREY:					
Croydon	9,012	191	217	21	24
Other districts within 10 miles [3] . . .	20,550	212	247	10	12
Other towns within 15 miles [4]	28,415	150	174	5	6
KENT:					
Penge	770	26	27	34	35
Other towns within 15 miles [5] . . .	22,133	142	160	6	7
HERTS:					
Town within 15 miles (Barnet) . . .	3,114	12	14	4	4
Total of above . .	288,060	2,890	3,220	10	11

[1] Viz., Buckhurst Hill, Romford, Loughton, Waltham Cross.

[2] Within 10 miles: Edmonton, Southgate, Wood Green, Friern Barnet, Finchley, Hendon, Wembley, Ealing (including Greenford and Hanwell), Heston and Isleworth, Brentford and Chiswick; between 10 and 12 miles: Enfield, Harrow, Twickenham, Teddington, Hampton, Hampton Wick, Southall.

[3] Within 10 miles; Barnes, Richmond, Malden, Wimbledon, Merton, Mitcham, Carshalton; 10–12 miles: Kingston, Surbiton, Sutton and Cheam.

[4] E. & W. Molesey, Esher, Epsom, Coulsdon.

[5] Beckenham, Bromley, Chislehurst, Erith, Bexley, Crayford.

TABLE IV

Sex-Distribution of Population: Survey Area, 1891 and 1921.

	Males. 000's.		Females. 000's.		Females, per 100 Males.	
	1891.	1921.	1891.	1921.	1891.	1921.
County of London: All.	1,999	2,072	2,230	2,413	111·6	116·4
City	19·0	6·7	18·7	7·0	98	104
Finsbury	54·3	36·2	55·7	39·8	103	110
Holborn	32·7	20·7	34·1	22·5	104	109
Central: Total	*106*	*64*	*108*	*69*	*102*	*109*
Bethnal Green	63·3	56·8	65·8	60·5	104	107
Poplar	84·3	80·4	82·6	82·2	98	102
Shoreditch	61·0	50·3	63·5	53·9	104	107
Stepney	143·8	122·5	141·3	127·1	98	104
East: Total.	*352*	*310*	*352*	*324*	*100*	*104*
St. Pancras.	113·8	99·6	121·5	111·7	107	112
Hampstead	26·7	33·3	41·4	52·9	155	159
Islington	150·8	154·7	168·4	176·1	112	114
St. Marylebone	62·9	41·0	80·6	63·2	128	153
Hackney	92·2	102·0	107·4	120·1	116	118
Stoke Newington	21·6	23·5	26·4	28·7	127	112
North: Total	*468*	*454*	*546*	*553*	*117*	*122*
Chelsea	33·5	25·8	39·5	37·9	118	147
Fulham	42·9	73·2	48·9	84·7	114	116
Hammersmith	44·2	62·5	53·1	67·8	120	108
Kensington	67·6	67·8	102·5	108·1	152	159
Paddington.	57·7	60·5	78·3	83·8	136	138
Westminster	95·2	61·4	106·8	80·2	112	131
West: Total	*341*	*351*	*429*	*462*	*126*	*132*

Battersea	73·4		78·7		76·8		89·1		105		113
Bermondsey	68·6		58·3		67·4		61·1		98		105
Camberwell	110·7		125·5		123·0		141·7		111		113
Deptford	48·8		54·1		53·0		58·4		109		108
Greenwich	38·3		48·9		40·2		51·6		105		105
Lambeth	131·3		141·5		147·1		161·3		112		114
Lewisham	37·9		79·2		51·0		95·0		130		120
Southwark	101·6		89·7		100·9		94·8		99		106
Wandsworth	68·9		147·2		86·6		181·1		126		123
Woolwich	51·6		69·7		47·4		70·7		92		101
South: Total		*731*		*893*		*793*		*1,004*	*108*		*113*
West Ham	102·3		146·2		102·6		154·5		100		106
Leyton	30·3		60·7		32·8		67·6		108		111
East Ham	17·0		69·4		15·8		74·0		93		107
Walthamstow	22·6		61·8		23·7		67·6		105		110
Tottenham	34·5		69·4		36·9		77·2		107		111
Barking	7·3		17·4		7·0		18·1		96		104
External East: Total		*214*		*424*		*219*		*459*	*102*		*108*
Hornsey	19·0		37·8		25·2		49·9		133		132
Willesden	28·1		76·8		33·2		88·9		118		116
Acton	10·6		28·3		13·6		33·0		128		116
External N. & W.: Total		*58*		*143*		*72*		*172*	*124*		*120*
Penge	8·7		12·0		11·7		14·3		135		119
Total		*2,271*		*2,651*		*2,523*		*3,058*	*111*		*115*
Total excluding Penge (Survey Area)		*2,262*		*2,639*		*2,511*		*3,043*	*111*		*115*
England and Wales	—	—	—	—	—	—	—	—	*106·4*		*109·5*

TABLE V

Age-Distribution of Population, Survey Area, 1891 and 1921.

(*A*) *Per* 100 *of each Sex.*

	County of London.						Extra Metropolitan Boroughs.			Aggregate Survey Area.	England and Wales.
	Central.	East.	North.	West.	South.	Total.	East.	N. and W.	Total.		
						Males: 1891.					
0–	20·7	25·3	23·1	21·6	25·2	23·8	28·5	27·0	28·2	24·4	24·7
10–	10·0	10·8	10·0	9·3	10·9	10·3	12·0	10·9	11·8	10·5	11·5
15–	10·6	10·2	9·8	9·5	10·0	9·9	9·8	9·5	9·7	9·8	10·4
20–	41·0	37·5	39·9	41·4	37·4	39·0	35·6	37·6	36·1	38·6	35·2
45–	14·6	13·0	13·7	14·5	13·3	13·7	11·6	12·2	11·7	13·5	13·9
65–	3·1	3·1	3·5	3·7	3·2	3·3	2·5	2·8	2·5	3·2	4·3
	100	100	100	100	100	100	100	100	100	100	100
						1921.					
0–	16·7	21·9	18·2	16·5	19·3	19·1	20·8	18·2	20·2	19·1	19·1
10–	9·3	11·6	9·3	8·3	10·1	9·6	11·2	9·7	10·9	10·0	10·2
15–	9·6	10·5	8·7	8·5	9·2	9·1	10·0	8·8	9·7	9·3	9·5
20–	37·8	34·3	38·0	39·5	36·8	37·2	35·8	38·4	36·4	37·1	36·3
45–	21·9	17·4	20·4	21·5	19·6	19·8	18·0	20·2	18·5	19·6	19·5
65–	4·7	4·3	5·4	5·7	5·0	5·2	4·2	4·7	4·3	4·9	5·4
	100	100	100	100	100	100	100	100	100	100	100
						Females: 1891.					
0–	20·8	25·7	20·0	17·6	23·3	21·7	28·4	22·1	26·9	22·2	23·3
10–	9·1	10·7	8·9	7·8	10·2	9·5	11·7	9·5	11·2	9·7	10·8
15–	10·2	9·7	10·0	9·7	9·8	9·9	9·2	11·3	9·7	9·8	9·9
20–	40·2	36·2	41·6	45·1	38·3	40·1	35·6	40·8	36·9	39·8	36·2
45–	15·4	13·6	14·7	15·0	13·9	14·3	11·7	12·5	11·9	14·1	14·7
65–	4·3	4·1	4·8	4·8	4·5	4·5	3·4	3·9	3·5	4·4	5·1
	100	100	100	100	100	100	100	100	100	100	100
						1921.					
0–	15·2	20·8	14·7	12·3	16·9	16·0	18·8	14·9	17·8	16·3	17·1
10–	8·4	10·9	7·8	6·6	9·0	8·5	10·3	8·3	9·8	8·8	9·2
15–	9·1	10·5	8·5	8·3	9·0	9·0	9·6	8·6	9·3	9·1	9·0
20–	41·6	37·1	42·4	44·4	39·6	40·8	38·8	41·9	39·6	40·6	38·9
45–	20·0	15·9	19·9	21·4	19·0	19·3	17·2	20·0	18·0	19·0	19·2
65–	5·7	4·7	6·7	7·0	6·5	6·4	5·3	6·3	5·5	6·2	6·6
	100	100	100	100	100	100	100	100	100	100	100

(*B*) *Per* 100 *of Population.*

						1891.					
All											
Males	49	50	46	44	48	47	49	45	48	47	48·5
All											
Females	51	50	54	56	52	53	51	55	52	53	51·5
						1921.					
All											
Males	48	49	45	43	47	46	48	45	47	46	48
All											
Females	52	51	55	57	53	54	52	55	53	54	52

TABLE VI

Birthplaces of Population: County of London, 1881–1921.

Year.	Number born in				Percentage born in		
	London.	Rest of U.K.	Abroad.	Total.	London.	Rest of U.K.	Abroad.
1881	2,401,499 [1]	1,308,356 [1]	106,678 [1]	3,816,533 [1]	63·0	34·3	2·7
1891	2,746,403 [1]	1,325,718 [1]	136,283 [1]	4,208,404 [1]	65·3	31·5	3·2
1901	3,016,580	1,324,437	195,524	4,536,541	66·5	29·2	4·3
1911	3,084,999	1,174,326	210,268 [2]	4,521,684	69·0	26·3	4·7
1921	3,153,142	1,111,860	188,781 [2]	4,484,523	70·7	25·0	4·3

[1] Census Figures corrected for changes of area (Local Govt. Act, 1899, etc.), in order to be comparable with those of subsequent years.

[2] In these years a relatively small number of persons who omitted to state their birthplaces have been distributed proportionately among the first three columns.

TABLE VII

COUNTRY OF BIRTH OF FOREIGN-BORN PERSONS LIVING IN COUNTY OF LONDON, 1881–1921.

Country.	1881.	1891.	1901.	1911.	1921.
Austria . .	1,278	3,041	6,189	8,869	1,552
Hungary .	247	471	750	1,145	591
Belgium .	1,492	2,044	2,102	2,502	4,949
Denmark .	553	827	946	1,494	1,510
France . .	8,251	10,366	11,264	16,127	14,339
Germany .	21,966	26,920	27,427	31,254	9,083
Greece . .	228	184	211	461	949
Holland .	4,193	4,289	4,249	4,629	4,140
Italy . .	3,504	5,138	10,879	12,103	11,733
Norway .	598	1,001	1,067	1,151	821
Portugal .	151	177	128	336	322
Russia . .	1,778	12,034	38,119	42,301	35,021
Poland . .	6,931	14,708	15,420	26,119	30,969
Servia . .					
Roumania .					
Bulgaria .	40	298	2,116	2,532	3,262
Montenegro .					
Spain . .	473	650	666	1,114	1,256
Sweden .	904	1,432	1,675	1,754	1,630
Switzerland .	2,296	3,295	4,419	5,701	4,984
Turkey .	253	458	660	1,266	608
Asia, Africa .	341	1,004	583	2,236	3,453
U.S.A. . .	4,301	4,903	5,561	8,242	9,270
Others . .	974	2,813	947	4,192	6,640
Total .	60,252	95,053	135,377	175,528	147,082

NOTE.—Between 1911 and 1921 the boundaries of several of the Countries were altered by the Treaties of Peace.

TABLE VIII

PERCENTAGES OF THE POPULATION OF EACH LONDON BOROUGH, BORN IN LONDON, REST OF U.K., AND ABROAD IN 1881, 1911 AND 1921.

Place of Residence.	Place of Birth.								
	1881.			1911.			1921.		
	London.	Rest of U.K.	Abroad.	London.	Rest of U.K.	Abroad.	London.	Rest of U.K.	Abroad.
City of London	60·5	35·6	3·9	56·0	37·1	6·9	57·4	36·3	6·3
Battersea	60·5	38·1	1·4	70·8	27·7	1·5	73·6	25·1	1·3
Bermondsey	72·6	26·2	1·2	84·7	14·2	1·1	87·6	11·5	0·9
Bethnal Green	83·5	15·5	1·1	84·8	8·5	6·7	87·1	6·9	6·0
Camberwell	66·5	31·7	1·8	77·6	21·0	1·4	79·6	19·2	1·2
Chelsea	56·1	42·0	1·9	56·3	39·4	4·3	56·8	38·6	4·6
Deptford	65·2	33·3	1·5	77·4	21·5	1·1	79·3	19·8	0·9
Finsbury	72·8	25·0	2·2	81·1	15·6	3·3	83·4	13·7	2·9
Fulham	68·9	29·5	1·6	66·1	31·2	2·7	68·5	29·2	2·3
Greenwich	63·6	34·3	2·1	69·7	28·3	2·0	70·9	27·3	1·8
Hackney	67·3[1]	30·8[1]	1·9[1]	77·5	19·4	3·1	79·7	16·2	4·1
Hammersmith	56·3	41·2	2·5	61·3	34·8	3·9	62·9	33·8	3·3
Hampstead	50·8	44·8	4·4	51·0	41·9	7·1	49·1	43·3	7·6
Holborn	61·8	33·4	4·8	57·3	29·4	13·3	53·0	33·0	14·0
Islington	63·2	34·7	2·1	74·1	23·7	2·2	76·3	21·6	2·1
Kensington	43·8	50·9	5·3	52·3	40·4	7·3	53·6	38·3	8·1
Lambeth	62·9	35·4	1·7	69·8	27·5	2·7	71·5	25·9	2·6
Lewisham	54·9	42·0	3·1	64·8	33·1	2·1	67·4	30·9	1·7
Paddington	47·2	47·8	5·0	55·1	39·3	5·6	56·5	37·5	6·0
Poplar	66·3	31·9	1·8	80·3	18·0	1·7	83·1	14·9	2·0
St. Marylebone	55·8	40·4	3·8	55·2	37·3	7·5	54·5	37·5	8·0
St. Pancras	60·6	36·7	2·7	68·1	26·1	5·8	68·5	26·4	5·1
Shoreditch	76·3	22·4	1·3	86·8	11·0	2·2	88·7	9·3	2·0
Southwark	69·8	29·0	1·2	80·4	18·2	1·4	83·2	15·5	1·3
Stepney	70·5	22·9	6·6	68·8	10·5	20·7	74·3	8·6	17·1
Stoke Newington	—	—	—	70·2	25·4	4·4	73·4	22·0	4·6
Wandsworth	56·2	41·6	2·2	62·7	35·0	2·3	64·5	33·2	2·3
Westminster	52·4	43·2	4·4	47·2	42·2	10·6	45·3	43·3	11·4
Woolwich	55·6	41·3	3·1	62·1	35·3	2·6	62·0	35·8	2·2
Administrative County of London	63·0	34·3	2·7	69·0	26·3	4·7	70·7	24·9	4·4

[1] Includes Stoke Newington in 1881.

CHAPTER III

CHANGES IN THE COST OF LIVING

The true effect of movements of money-rates of wages and earnings on the comfort and well-being of the people can only be properly understood if taken in conjunction with the concurrent movement of the prices of necessaries of life. Hence in any comparative survey of London Life and Labour at different dates, and especially in any comparison of the proportion of the London population living at those dates above or below an assumed "poverty" line, it is essential to take into account the changes which have taken place in a workman's cost of living between those dates. This is equally true, whether the poverty line be determined by calculations of the cost of providing the bare necessaries of life for a family of standard size, or whether it be fixed (like Charles Booth's poverty line) by reference to the conditions of life of an average family whose money income falls within certain limits. In both cases changes in the price level of necessaries of London workmen's consumption will carry with them a corresponding movement of the "poverty line" as measured by money-income or by money-cost of living.

As a preliminary therefore to the comparative study of London poverty, and as a necessary corrective to statistics of changes of London wages and earnings, it is essential to estimate, so far as the data permit, the changes which have taken place since the former survey in the level of cost of living of the families of London workpeople. For this purpose we can only expect to obtain approximate data, and it is desirable in the first

place to limit the inquiry to four main categories of workmen's household expenditure, viz. food, fuel and light, rent and clothing.

The Cost of Prime Necessaries

(*a*) *Food.*—We begin with the cost of food, which is much the most important of the four main items of necessary expenditure. Statistics of retail prices of food in London were collected and published by the Board of Trade for each year from 1892 up to the outbreak of war. In addition an index of London retail prices of food for earlier years was included in the Board of Trade Blue Book Cd. 2337 of 1904, and, though this calculation was based on a more restricted number of staple articles of consumption, it has been found possible with its assistance to reconstruct a fairly comparable figure for the three years immediately preceding 1892, so as to enable the comparison to be carried back to the period when Charles Booth made his first survey.

Since the war, during the course of which the responsibility for statistics of cost of living passed from the Board of Trade to the new Ministry of Labour, no separate London figures have been published, and slight changes have been made in the basis of the figures for retail prices in the United Kingdom, either in order to take account of changed conditions or to avoid difficulties of pre-war and post-war comparisons. It has, however, been found possible to obtain sufficient data as to London retail prices since the war to enable a parallel index of London prices to be constructed, and an endeavour has been made to allow for the minor changes in the basic commodities, in such a way as to enable the post-war food-price index to be linked up with that calculated for July, 1914—the last complete pre-war month. The technical procedure adopted for this purpose is explained in the note on page 107, in which particulars are also given of the articles of food included in the index.

It is sufficient here to say that these articles of food

include *inter alia* bread, flour, potatoes, beef, mutton, bacon, milk, butter and margarine, eggs, cheese, tea and sugar, and that the main groups (e.g. cereals, meat, dairy produce, etc.) are "weighted" roughly according to their relative importance in working-class consumption. The resulting chain of figures for retail cost of food is given in the first column of the table on p. 105 which takes the price level of 1889–91 as the datum line from which percentage changes have been calculated. A glance at this table shows that the level of food prices has oscillated considerably in individual years. This is mainly owing to upward or downward changes in the price of bread, which exercise an important influence on the total budget of a workman's family. It has therefore appeared safer to compare the averages of three-year periods rather than the figures of individual years, and this comparison of triennial averages is shown in the following summary table:

INDEX NUMBER OF LONDON RETAIL FOOD PRICES.

Average of	1889–91 = 100.	Average of	1889–91 = 100.
1889–91	100	1907–09	103
1892–94	96	1910–12	107·5
1895–97	90	[War period]	
1898–1900	95	1920–22	244
1901–03	98	1923–25	187
1904–06	99	1926–28	174

This table shows a rise of about 74 per cent. in the average retail cost of food to a London workman's family since the beginning of the Booth Survey. More than three-quarters of this increase has taken place since the outbreak of the Great War, when the great disturbance of money-values began. Food prices reached their peak in 1920, when the level was more than three times as high as in the years 1889–91. From 1921 there has been a steady fall until the present time.

(*b*) *Fuel and Light.*—As regards fuel and light we

are dependent for long-period comparisons on statistics of the London prices of coal, gas, oil and candles.

The sources of information are described in the note on p. 107 and the yearly figures are given in the table on p. 105. The triennial averages are as follows:

INDEX OF LONDON FUEL AND LIGHT PRICES.

	1889–91=100.		1889–91=100.
1889–91	100	1907–09	111
1892–94	106	1910–12	107
1895–97	98	[War period]	
1898–1900	111	1920–22	233
1901–03	112	1923–25	194
1904–06	104	1926–28	195

It appears from these figures that the cost of fuel and light has nearly doubled in the period under review.

(*c*) *Rents* (*including Rates*).—The next item to be considered is the workman's expenditure on rent. The course of rents (including rates) for workmen's dwellings is dealt with in Chapter V (pp. 144–150) where the basis of the estimates is fully explained. It is therefore only necessary for our present purpose to refer to the conclusion reached in that chapter as regards the rise of these rentals since the time of Charles Booth's survey. The data are not, like those of food and fuel prices, obtainable for every year, the pre-war figures being mainly based on the quinquennial assessments of London houses of low rentals. In order therefore to make the period of comparison comparable with that of retail prices, it is desirable to start from 1890 as the "datum line," and to compare the level of working-class rentals in that year with the mean of 1925 and 1928. The result is to show an average increase in money rentals (including rates) of 71 per cent.

(*d*) *Clothing*.—We now arrive at the complicated item of the cost of clothing. Any attempt to trace changes in the cost of clothing is attended with great difficulties, arising from such causes as the insufficiency of the data, the comparative scarcity of standard articles, the con-

tinual changes of fashion, and demand, and the fact that clothing is not, like food, immediately consumed, but has a more or less prolonged life. For these reasons a long-period comparison of the cost of individual articles of clothing, irrespective of differences of quality and durability, might be very misleading. The first systematic attempt to estimate the changes in the average retail cost of clothing over a series of years was made by the Board of Trade in 1904, and in the report dealing with the matter, the difficulty arising from changes of durability was fully explained.[1] It was made clear that for this and other reasons, an index of clothing prices must be based, so far as practicable, on changes in the price of identical articles, and the actual index number published was based on the course of prices of twenty-five articles of men's and women's clothing and clothing materials of standard quality, derived from information furnished by a number of firms. The items comprised in the index number at that time included nine kinds of material for men's and women's outer clothing, eight kinds of material for underclothing, three descriptions of socks and stockings, and five varieties of boots and shoes. This series of index numbers was subsequently extended until the beginning of the war on an enlarged basis, including a good many more articles of clothing. The Ministry of Labour have since published index numbers for post-war years entirely based on the retail cost of finished articles.[2]

It will thus be seen that the available materials for a long-period index of clothing prices consist of three successive indices constructed in somewhat different ways. There is no difficulty in "splicing" together these indices by the usual statistical methods, but the question arises how far the resulting chain of figures can be accepted without qualification as representing the trend

[1] Second series of Memoranda on British and Foreign Trade and Industrial Conditions (Cd. 2337), 1904, p. 52.

[2] Where materials have been included (e.g. for women's dress), an allowance has been made for the cost of making up.

of clothing prices for working-class families in London from 1890 to the present time.

The greater part of the basic price-data in pre-war years were derived from London firms and stores, so that there is no difficulty in treating the series of pre-war figures as representative of London prices. In the post-war figures the London element is smaller, but it is believed that the trend of prices of the cheaper articles of clothing has not differed materially in London from the rest of the country. A weakness in the earlier series of figures is the presence of many prices of materials without any allowance for the cost of making up. This defect was largely remedied in the series of figures for 1905 onwards, and it wholly disappeared in the post-war index. As the movement of prices of clothing and materials during the post-war period was very much more rapid than in the years before the war it is unlikely that the partial omission to give full weight to making up costs in those years can have any appreciable effect on the comparison between the price levels at the beginning and end of the period of forty years.[1]

A more serious question is whether in the post-war period when prices and qualities were changing rapidly, a comparison based either on identical articles, or on the substitution of articles most nearly identical with those which had gone out of general use, could be relied on to represent the relative cost at which a workman's family can obtain equal satisfaction in respect of clothing at different dates. Without entering into a technical discussion it may be said that, in circumstances such as those of the post-war period, there is ground for the belief that a comparison of the nature indicated may tend somewhat to exaggerate the real rise, especially in the case of the cheapest qualities of clothing.

[1] It will be observed on a reference to the Table on page 105 that clothing prices, estimated according to the Index, rose by about 8 per cent. between 1889–91 and 1910. In the same period the average rate of weekly wages in London rose about 9 per cent. (see p. 118). Hence it is unlikely that it would make any great difference in the comparison between these dates if the cost of making up had been fully allowed for.

For the above reason it is suggested that the figures for post-war years in the table on p. 105 (third column) should be regarded as "maxima," and that it would be prudent to allow a fairly wide margin of error for possible excess.

The figures in the Table are averaged for triennial periods in the following summary, where an allowance of 25 points has been made for possible error in excess.

INDEX OF CLOTHING PRICES.

	1889–91=100.		1889–91=100.
1889–91	100	1907–09	106
1892–94	99	1910–12	112
1895–97	98	[War period]	
1898–1900	97	1923–25	237–262
1901–03	99	1926–28	228–253
1904–06	102		

The effect of the figures is to show that the cost of clothing for working-class families in London is from $2\frac{1}{4}$ to $2\frac{1}{2}$ times its cost in 1889–91.

In the last decade of the nineteenth century there was a gradual but slow fall in clothing prices, but this fall soon gave place to a rise, the price level of 1912–14 being about 16 per cent. higher than at the time of the Booth Poverty Survey. In the years of inflated prices immediately following the war, the cost of clothing rose to a very high level, and though it has dropped rapidly from 1921 onwards, it still exceeds the cost of 1889–91 by a much higher percentage than the cost of food. The effect of the rise on the actual budget of a workman's family has doubtless been mitigated, not only by changes of quality and material, but also by changes of habit and fashion.

COMBINED INDEX OF COST OF NECESSARIES

It now remains to combine the separate figures obtained for food, fuel, rent and clothing, into a single "weighted" index number.

The partial indices for each of the four items may be summarised as follows:

LEVEL OF RETAIL PRICES IN LONDON FOR THE YEARS 1926–8.
(Average of 1889–91 prices = 100.)

Food	174
Fuel and light	195
Rent (including rates)	171
Clothing	228–253

If each of the above items be "weighted" according to the scale used by the Ministry of Labour in constructing the official Cost of Living Index [1] it will be found that the cost of living of London working-class families, so far as dependent on the four principal items of necessary expenditure, has risen from 100 in 1889–91 to between 182 and 185 in 1926–8.

The scale of weights is of course open to some criticism in detail. It represents roughly the estimated proportionate expenditure of working-class families on each of the four main groups of items early in 1914 in the United Kingdom. There is no material by which they can be adjusted specially for London or to other dates. At first sight it would appear that the supposed changes in habits of expenditure between 1890 and 1929 must vitiate any Cost of Living Index number extending over so long a period, but in fact the weights must be the same throughout to give any easily intelligible result, and this is more important than an exact determination at any date and place. Further, even considerable adjustments of the weights would make little difference to the resulting averages, and the relative weights at any one time would still vary as between families of different economic grades. Strict accuracy of weighting is therefore unattainable and unnecessary, and the present purpose will be served sufficiently well by the "official" scale of weights, provided that an adequate margin be allowed for possible error in the final result.[2]

[1] i.e. Food (15), Fuel and Light (2), Rent (4), Clothing (3).

[2] Probably weights specially calculated for London would attribute a somewhat higher proportionate expenditure to rent. But a glance at the summary Table on p. 106 will show that a considerable shifting of this proportion would make very little difference to the result. If, for example, the proportionate weight of rent were increased by one half, this would only reduce the final Index by one point—which is well within the margin of error.

The effect of all the above calculations is to indicate that the percentage rise, since the beginning of Charles Booth's inquiry, in the money-cost of the principal necessaries of life to a London workman's family is in the neighbourhood of from 82 to 85 per cent. If, in view of the approximate and doubtful character of some of the data, it is thought desirable to allow a wider margin for possible error, the final index may be expressed as a range, between 80 and 87 per cent., the mean of the range being 83·5.

The Price of Bread in London

In the above analysis of the changes in the cost of necessaries no reference has been made to the actual prices of individual commodities. This omission is intentional, since the series of prices on which the index is built up are necessarily those which enable continuity of comparisons to be maintained over a long period, and such prices do not therefore always represent the average or predominant prices paid at each given date for the qualities of goods actually purchased at that time.

In the case however of the all-important commodity bread, a continuous Table can be given of the mean retail price of bread in London for a long period of years. On p. 106 these prices are shown for each year from 1880 to 1928.

It will be seen that the average price of the four-pound loaf in London in 1890 was 6*d.* In the period between 1890 and the outbreak of the war, it oscillated between 5*d.* and 6·2*d.*, and stood at 5·8*d.* at the beginning of the war. In the years immediately following the war the price of bread in London rose to 12·4*d.*, from which level it has declined (though with upward and downward oscillations) until in 1928 it stood at 8·6*d.*

If we adopt the method of triennial comparisons as in the case of retail prices generally, we obtain the following summary Table:

London Retail Bread Prices.

Average of Years.	Average Price of 4 lb. Loaf. *d.*	Average of Years.	Average Price of 4 lb. Loaf. *d.*
1880–82	7·1	1904–06	5·5
1883–85	6·7	1907–09	5·8
1886–88	5·9	1910–12	5·7
1889–91	6·1	[War period]	
1892–94	5·8	1920–22	11·1
1895–97	5·2	1923–25	9·0
1898–1900	5·4	1926–28	9·1
1901–03	5·3		

It will be seen that as between the periods 1889–91 and 1926–8 the money price of bread has risen by almost exactly one-half. This is much less than the average rise of prices of foodstuffs. As, therefore, the proportional expenditure on bread is usually greatest in the poorest grades of households, it is probable that the classes B and CD of Charles Booth's classification (i.e. those living at or below the poverty line)[1] may have been somewhat less affected by the rise in the cost of food than those who spend less on bread and more on other articles of diet.

The Cost of Other Objects of Expenditure

The calculations in the preceding pages are confined to the measurement of changes in the purchasing power of a workman's wage when applied to the prime necessaries of life. Read in conjunction with the estimate in Chapter IV of the movement of money-wages, they make it clear that there must have been a considerable expansion of the margin between the total amount of the average workman's money income and his necessary or customary expenditure on food, clothing, rent, fuel and light. This is evident from the fact that, as shown in the Chapter mentioned (see p. 119), average money-rates of weekly wages in London have risen by 116 per cent. since 1890 and average money-earnings probably still more, while the "cost of living," as

[1] See Appendix I, p. 404.

already defined, has only risen by 80 to 87 per cent. There are no trustworthy figures which enable the absolute magnitude of the margin between total income and expenditure on "necessaries" to be satisfactorily estimated. Family budgets seldom give full information as to "luxury" expenditure, especially expenditure on beer and tobacco; and in the few where such particulars are given on a trustworthy basis the families can rarely be regarded as typical.

Nevertheless the outstanding fact that the average margin between income and the cost of prime necessaries has considerably widened in recent years, indicates that a survey of cost of living would be incomplete which wholly ignored the movement of prices of certain commodities and services outside the range of what are usually termed the necessaries of life. It must be said at once that there are not sufficient materials for the construction of an index number of workmen's "luxury" expenditure, even if the character of the various items were such as to lend itself to this form of measurement. All that is possible is to assemble such figures as will enable the price level of a few typical objects of expenditure to be compared with the corresponding level at the time of the Booth Survey. The items selected for this purpose are alcoholic drink, tobacco, locomotion, newspapers, amusements, and trade union subscriptions.

It is convenient to begin with alcoholic drink and tobacco—two articles of consumption which are undoubted "luxuries," as is proved by the fact that a large proportion of the population voluntarily abstain from one or both of them. In estimating the movement of prices of these articles endeavour has been made in the first place to compare like with like; i.e., to trace the course of prices of identical or comparable kinds and qualities.

(1) As regards alcoholic liquor, attention has been confined to beer, which accounts for much the greater part of the London workman's expenditure on alcoholic liquors.

A large and old-established London brewery has supplied the following comparison between 1890 and 1929:

	Price per Quart. 1890.	1929.
	d.	*s.* *d.*
"Running" ale	4	1 0
Bitter ale	6	1 2
Porter	3½	0 10
Light bottled beer	5	1 2

It will be seen that the increase varies from 133 to 200 per cent., a large proportion of the rise being of course accounted for by the great increase in the Excise duty. Had the Excise duty been excluded the rise of price would have been under 50 per cent.

The consumption of alcoholic liquor is of such deep interest in relation to social welfare as well as to cost of living, that much labour has been devoted to an attempt to arrive at some rough estimate of the change which has taken place during the past forty years in the average amount of beer consumed in London. The difficulties of the computation have been very great, owing partly to changes in the London "collection" area and in the strength of the beer brewed, partly to the absence of any exact figures for the influx and efflux of beer between London and other areas. With the aid however of the Customs and Excise Department and of the Brewers' Society a rough computation has been arrived at, by methods explained in the note on p. 109, which however can only be regarded as approximate and for which the Survey alone is responsible.

The broad result is that the *per capita* consumption of beer of "standard" strength in the London area has been reduced by about one half, i.e. from about 46 gallons in 1891 to about 23 gallons in 1928. As London beer has decreased in strength, and is now at least 20 per cent. below "standard" specific gravity, the actual volume of liquid consumed has been reduced by somewhat less than a half, i.e. roughly by two-fifths.[1]

[1] In 1891 London beer was certainly not *below* standard specific gravity. (See Booth Series II, Vol. 3, p. 116.)

Thus it would appear that for every ten glasses of beer consumed in 1891 by the average Londoner, he drank in 1928 about six glasses of lighter beer, with a total alcoholic content not more than half that of the ten glasses consumed in the earlier year.

For this reduced quantity of lighter beer rather more than half as much again is paid in money. At present prices and rate of consumption the average expenditure per head on beer in London must be well over 2*s*. a week.

This is not, however, the whole story, for more than half the retail price of beer—nearly 7*d*. in the shilling—is represented by taxation.

(2) As regards tobacco, the Imperial Tobacco Company have supplied figures relating to the course of retail prices of a typical brand of tobacco in large and continuous popular demand from 1890 to the present time. The information shows that the price was practically unchanged between 1890 and 1900, but that from 1901 until the present time there have been seven increases of price, following in each case a rise in Customs duty. The aggregate effect has been to raise the price from 4*d*. to 9½*d*. per ounce, an increase of 137 per cent. (Inquiries as to other brands of cheap tobacco yield very similar percentages of increase.) So far from this rise being offset, as in the case of beer, by any decline in smoking, there has been a great, and since the beginning of the war a very rapid, rise in the consumption of tobacco per head of the population. No separate figures can be obtained for London, but in the country generally, the *per capita* consumption of tobacco more than doubled between 1890 and 1928, and half the total increase took place after 1913. A large part of the rise as compared with pre-war years is due to the great increase in cigarette smoking. This is strikingly brought out by the fact that between 1907 and 1924 (the years of the first and third Censuses of Production) the proportion of manufactured tobacco used for cigarettes rose from 30 to over 60 per cent.

of the total output. Assuming, as we reasonably may, that the London consumption followed the general trend of the country, it would seem that the average money expenditure per head of the London population on tobacco must be well over four times as great as in 1890.

Over 8*d.* in the shilling of this expenditure is represented by taxation.

(3) The cost of locomotion stands in a different position from ordinary "luxury" expenditure, inasmuch as a substantial part of the average workman's expenditure on travel is necessary to convey him to and from his place of work. On the other hand this expenditure does not enter into the cost of living in quite the same way as such universal necessaries as food, clothing and shelter. For a large section of the working population live so near their work, either from choice or necessity, that they travel to it on foot without cost. Part at least of the saving thus effected is often paid away in the shape of higher rent: in fact the cost of travel to and from work commonly bears an inverse relation to the level of house rent, the workman who moves away from the congested centre frequently paying more for travel and less for housing.

On the whole it seems best to deal with travel as a single item, and not to make the hopeless attempt to distinguish the part which is "necessary" from that which is "luxury" expenditure.

Special inquiries made for the purpose of the present survey give the following results for tramways in the London County area:

AVERAGE CHARGE PER PASSENGER-MILE: LONDON TRAMWAYS.

Years.	Ordinary Fares. *d.*	Workmen's Fares. *d.*
1895	0·67	0·47
1909–1913	0·50	—
1919	0·56	0·50
1928	0·56	0·37
Percentage change, 1895–1928	−16·4	−21·3

The mode of calculation is explained in the note on p. 109. As the number of passengers carried by workmen's cars is a relatively small fraction of the total, it would be safe to say that the average charge per passenger mile on London tramcars has declined by about 17 per cent., or say one-sixth. As regards omnibuses the following figures have been compiled from data supplied by the London General Omnibus Company.

AVERAGE RECEIPTS PER PASSENGER-MILE: LONDON BUSES.

Year.	Receipts. *d.*
1895	0·92
1913	0·59
1920	0·79
1922	1·05
1923	0·96
1929	0·96

These figures do not take account of cheap mid-day facilities. They indicate that the level of fares measured by mileage is now about the same as in 1895, a sharp fall between 1895 and 1913 having been recovered during the post-war period.

The cost of transport by rail has moved in a different direction, the average rate per mile on ordinary trains having risen from 1*d.* in the "nineties" to about 1·4*d.* per mile in 1928 for passengers paying standard fares. Meanwhile however there has been a great development of cheap fares at rates far below the standard. Omitting workmen's tickets, which are dealt with separately below, the receipts per mile from passengers at reduced fares (including day and half-day excursions, week-end tickets, etc.) averaged just under 1*d.* in 1928.[1] The proportion of passenger-miles travelled in London at "standard" or "reduced" fares cannot be stated, but the unweighted mean between the above rates would show an average rise of about one-fifth in the cost of travelling a given distance in ordinary main-line trains.

[1] For the whole of Great Britain.

The average rate per mile for workmen's tickets in the London area appears to have risen 0·23*d.* in 1895–1902, to 0·24*d.* in 1912, and 0·49*d.* in 1928; i.e., the rate has more than doubled. The average mileage rate on the Underground Railways in 1909 (the first year for which comparable figures are obtainable) was 0·72*d.* After falling to just over ½*d.* before the war, it rose to nearly 1*d.* in 1920–2, and has since declined to about 0·8*d.* in 1927 and succeeding years.

On the whole if due weight be given to each of the above means of local travel, it would seem that the average cost to the London workman and his family of travelling *a given distance* has not greatly altered as compared with the time of the Booth Survey.

Concurrently however the centrifugal movement of the population has undoubtedly increased the passenger mileage for which the average London workman needs to travel. Probably the net result is that the money expenditure by the average family on locomotion has increased, but that the rate of increase is a good deal less than that of their expenditure on commodities generally. Moreover in return for this increased expenditure, they obtain vastly improved services, both as regards comfort, frequency and (generally speaking) speed.

(4) The comparatively small item of newspapers has roughly doubled in cost since 1890. At that time (as at present) the workman's small expenditure on newspapers was usually divided between evening and Sunday papers, and most of the popular papers under both these categories have doubled in price (from ½*d.* to 1*d.*, and from 1*d.* to 2*d.* respectively).

(5) One of the most difficult comparisons is that of the cost of amusements and entertainments, the whole character and scope of which has so altered in the last forty years that it is almost impossible to compare like with like.

So far as can be judged from the scanty evidence available, the price of the cheapest seats in London

music-halls has risen from 2*d.*–4*d.* to 4*d.*–6*d.* As regards prices of admission to London theatres, a continuous record has been preserved in the collection of play-bills made by Mrs. Enthoven, who has been good enough to place them at the disposal of the Survey. An analysis of the prices of the cheaper seats shows that from 1880 until the war the gallery charge was almost uniformly 1*s.*, while that for the pit (unreserved) varied from 2*s.* to 2*s.* 6*d.* At the present time the predominant price for the gallery is 1*s.* 6*d.*, and for the pit 3*s.* 6*d.* (including entertainment tax in both cases). It is therefore reasonable to conclude that the price of admission to the cheaper seats at London theatres has increased by about one-half in the last forty years, practically the whole of the increase having taken place since the beginning of the war. Nearly half of the rise is due to the imposition of entertainment tax.

In the meantime there has been a vast growth of cinematograph entertainments, which are now *par excellence* the "poor man's theatre," with minimum prices of admission averaging 4*d.* to 6*d.*, and in many cases less for day performances. No comparison of cinema prices can be carried further back than the period just preceding the war. As between that period and 1928 such inquiries as have been possible indicate that the prices for the cheapest seats have not increased materially. There is no doubt that the exemption of seats at 6*d.* and under from entertainment tax has tended to prevent the cheapest prices from rising above 6*d.*

It is not possible with the data at present available to estimate what increase there has been in the frequency with which London workmen and members of their families attend places of entertainment, but the figures given on p. 291 point to a very great increase in the available provision of the means of entertainment, as indicated by the aggregate seating accommodation of theatres, cinema theatres and music-halls. It is therefore practically certain that a considerably larger weekly sum of money is spent by the average workman's family

on indoor amusements than in 1890, but there are no figures by which to measure the increase.

(6) We come next to the cost of Trade Union contributions. The rates of subscription charged in the "nineties" and at present by a number of Trade Unions having a considerable London membership have been obtained through the Ministry of Labour. The Unions included cover several branches of the building and engineering trades, printing, transport and municipal workers. Not all of the rates however are comparable, inasmuch as the benefits granted in return for the contributions have in some cases been greatly altered, while several of the Unions have come into existence since 1890, and others have been absorbed into amalgamations or have come to an end since that date. Moreover several Unions have more than one scale of contributions and benefits. Any inference from the figures must therefore be of the most general and tentative character. Subject to this caution an inspection of the figures indicates that the bulk of the increases range from 50 to 200 per cent., the "median" being 100 per cent. Thus we shall probably not be far wrong in concluding that the London Trade Unionist to-day is usually paying from one and a half to three times, or on the average (say) about double, the money contributions paid by his predecessor of forty years ago.

While the information contained in the foregoing paragraphs is not by any means sufficient to furnish the basis of a "cost of luxuries" index, it suggests that on the whole, with the notable exception of locomotion (and possibly also of amusements), the cost of the more important items of a workman's expenditure outside the prime necessaries of life, has increased a good deal more rapidly than the cost of necessaries.

The problem of the cost to the London workman of commodities and services other than bare necessaries presents itself in two different aspects, according as we seek to compare the cost per unit of similar or equiva-

lent articles or services, or to ascertain the mode in which the margin of income not absorbed by necessaries is allocated among different objects of expenditure. In the foregoing paragraphs the former question has been answered so far as the imperfect data allow, and in the course of arriving at this answer some light has been incidentally thrown on the second question, viz. the amount and distribution of "surplus" expenditure.

In the case of alcoholic drink the increased cost per unit has been so great as to curtail the consumption very appreciably, with results which are wholly beneficial to the standard of living, for heavy drinking, besides its other social effects, tends to depress this standard and to increase poverty, by curtailing the funds available for expenditure on the necessaries of life.

The contribution of a London workman's family to "indirect taxation" varies very widely according to their habits, ranging from a few pence, in the case of non-smoking "teetotal" families, up to ten or more times as much where there is a great consumption of drink and tobacco. As the whole of this taxation is already included in the price of the dutiable commodities consumed, it is of course not to be regarded as an additional burden. Similarly the workman's contribution to local rates is already included in his rental.

State-Aided Amenities

Finally it is necessary to take account of the fact that the advantages and amenities which the London workman and his family enjoy, either gratuitously or at a cost below their full market price, have increased to a very marked extent since Charles Booth's time.

Elementary School Education is now free, whereas at the time when Charles Booth began his inquiries the London workman (unless he could secure remission on account of poverty) had to pay school fees varying from 1*d*. to 9*d*. a week for each child of school age. By the year 1890 the remissions in London had already

become very considerable,[1] and the average annual income of the London School Board from school fees had fallen from 8*s*. 3*d*. per child in 1880–81 to 6*s*. 9*d*. in 1890–91. Thus before the abolition of school fees in London in 1891 the average cost to a London workman with three children was about £1 a year.

Much more important in relation to the standard of living is the State provision of universal Old Age pensions which has come into existence since Charles Booth began his inquiry, and of which the initiation in 1908 was largely due to his advocacy. In addition, widows' and orphans' pensions were established in 1925 on a contributory basis.

Moreover insurance against sickness and unemployment is now provided for on a scale and with a scope unknown to Charles Booth. The contributions of the State and of employers to the Insurance funds enable the employee to draw benefits to an amount which on an actuarial basis would have required a weekly contribution very much greater than that which he actually pays, to say nothing of the extra benefit (formerly known as "uncovenanted", and sometimes termed the "dole") which in certain circumstances the unemployed person has been able to draw without specific contribution, or of the greatly increased facilities for obtaining domiciliary relief under the Poor Law.[2] If to all these be added the growth of public amenities described in Chapter IX, and the improved health organisation referred to in Chapter VII, it will be seen how great an influence on the general standard of living has been exercised by various forms of public action.

The aggregate weekly insurance contribution from a workman's family varies very greatly with its composition and age distribution, but perhaps an average of 2*s*. 6*d*. would not be an unreasonable estimate. On the other hand, the actuarial value of the resulting benefits must amount to at least 7*s*. 6*d*. a week, exclusive of old age pension on a non-contributory basis. In addition to

[1] See Charles Booth's Vol. 3 (Series 1), p. 206. [2] See p. 371.

their direct insurance contribution the London workman's family of course contributes indirectly to the cost of social services through the rates included in house rent, and the imperial taxation included in the price of the dutiable articles which they consume.

When however full allowance has been made for these direct and indirect contributions it remains substantially true that the general provision for old age, sickness, and unemployment that has become available for the London workman and his family since the time of Charles Booth's Survey represents a very important net addition to their standard of comfort, and tends greatly to reduce the distress formerly associated with age, infirmity and bad times. Moreover only a minor part of the cost of this addition has fallen directly on the beneficiaries.

TABLE I. INDEX OF WORKMEN'S COST OF LIVING IN LONDON (1889–1928) BASED ON RETAIL PRICES OF FOOD, FUEL AND LIGHT, CLOTHING AND RENTS (INCLUDING RATES).

(*1889–91=100.*)

Year.	Food.	Fuel and Light.	Clothing.	Rent.	Weighted Averages of preceding columns.
1889–91	100	100	100	100	100
1892	100·5	106	100	—	101
1893	97	112	99	—	100
1894	92	100	98	—	95·5
1895	89	97	97	106·3	93·5
1896	89	97·5	98	—	94
1897	92	98·5	97	—	96
1898	96	99·5	96	—	98
1899	92	106	95	—	96
1900	97	128	99	108·6	102
1901	97	120	99·5	—	101·5
1902	98	111	99	—	101
1903	99·5	104	99	—	102
1904	99	105	101	—	102·5
1905	99·5	103	102	117·2	103
1906	98·5	104	103	—	103
1907	101·5	113	105	—	105·5
1908	104	111·5	106	—	107
1909	104	108	107	—	107
1910	106	106·5	110	116·2	108
1911	106	107	111	—	108
1912	111	109	114	—	112
1913	111	112	115	—	112·5
1914	113	114·5	116	—	112
War period	—	—	—	—	—
1920	307	231	483	173·0	302
1921	230	254	352	—	238
1922	196	213	255	—	201
1923	192	193	258	—	197
1924	186	198	261 [1]	—	194
1925	184	191·5	266	171·7	192
1926	181	205·5	256	—	191
1927	174	196·5	248	—	184
1928	169	182·5	254	171·0	181

[1] To be regarded as *maxima* (see text p. 90).

TABLE II. Summary of Table I (Index of Cost of Living) for Triennial Periods, 1889–91 to 1926–28.

Years.	Food.	Fuel and Light.	Clothing.	Rent.[1]	Weighted Average of Preceding Columns.
1889–1891	100	100	100	100	100
1892–1894	96	106	99	104	99
1895–1897	90	98	98	107	94
1898–1900	95	111	97	108	99
1901–1903	98	112	99	112	102
1904–1906	99	104	102	116·5	103
1907–1909	103	111	106	117	106
1910–1912	107·5	107	112	116	109
War period	—	—	—	—	—
1920–1922	244	233	363[2]	172·5	246
1923–1925	187	194	262[2]	172	198
1926–1928	174	195	253[2]	171	185

[1] The known data for rent relate to the years 1890, 1895, 1900, etc.: the triennial averages are obtained from these and the figures interpolated for intermediate years as explained on p. 108. [2] To be regarded as maxima.

TABLE III. Course of Average Bread Prices (4 lb. Loaf) in London, 1880–1929.

Year.	Price.	Year.	Price.	Year.	Price.
	d.		*d.*		*d.*
1880	7·0	1895	5·1	1910	5·9
1881	7·0	1896	5·1	1911	5·5
1882	7·4	1897	5·5	1912	5·8
1883	7·0	1898	6·0	1913	5·8
1884	6·8	1899	5·1	1914	5·5
1885	6·2	1900	5·2	War period	—
1886	6·3	1901	5·0	1920	11·6
1887	5·6	1902	5·3	1921	12·4
1888	5·7	1903	5·6	1922	9·2
1889	6·0	1904	5·5	1923	8·5
1890	6·0	1905	5·5	1924	8·7
1891	6·2	1906	5·5	1925	9·9
1892	6·2	1907	5·4	1926	9·6
1893	5·8	1908	5·8	1927	9·2
1894	5·5	1909	6·1	1928	8·6

CHAPTER III: NOTES ON STATISTICS

(*a*) Prime Necessaries.

Food. Index numbers of retail prices of food relating to London only were published by the Labour Department of the Board of Trade for some years before the war. The fullest series (1892–1914) is to be found in the 17th Abstract of Labour Statistics (1915). But with the compilation and publication of the "Ministry of Labour" cost of living index, these figures were discontinued. The Ministry of Labour, however, kindly furnished prices-data by means of which the pre-war series could be brought up to date, and this material was used in a manner as comparable as possible with the methods used in the construction of the pre-war index. The data collected for the food-group index of the Ministry of Labour comprise fifteen commodities as compared with the pre-war basis of twenty-three articles. The omission of rice, tapioca, oatmeal; pork; coffee, cocoa; and all the commodities of the "sugar group" except sugar, had to be allowed for by throwing the weights on to commodities most likely to show comparable fluctuations: while one extra commodity (margarine) was available for inclusion. The weighting system of the pre-war index, derived from the samples of working-class expenditure collected in 1903–4, was used as the basis of the adapted weighting. To extend the series back to 1889, use was made of the information relating to the London retail prices of eight commodities [1] in Cd. 1761 (1903), p. 233, and Cd. 2337 (1904), p. 75, which were also weighted in a manner as comparable as possible with the figures for 1892–1914.

The commodities included in the main part of the food index are as follow:

Group I: bread, flour, rice, tapioca, oatmeal, potatoes.

Group II: beef (British and imported), mutton (British and imported), pork, bacon.

Group III: milk, butter, margarine (1914–29), eggs, cheese.

Group IV: tea, coffee, cocoa.

Group V: sugar, jam, treacle, marmalade, currants, raisins.

For that part of the index relating to 1919–28, the mean of the prices for June 1 and December 1 was taken as the representative price for each commodity (a procedure subject to criticism only for the most abnormal years, e.g., 1920–21), and expressed as a percentage of the price of the article in July, 1914. The average of these ratios, weighted as above, gave the indices on the basis July, 1914 = 100; and these were then linked to the pre-war index by raising them in the ratio 111 : 100, the pre-war (Board of Trade) index for July, 1914, being 111.

Fuel and Lighting. For coal prices, the Ministry of Labour kindly supplied data for the years 1919–28 comparable with those used for the figures published in the 19th Abstract of Labour Statistics (Cd. 3140, p. 130), which are based on data relating to London only, and figures

[1] The figures for potatoes were discovered to be faulty, and omitted.

for earlier years (1889–91) were available in the Second Fiscal Blue Book (Cd. 2337).

Gas prices are given in Cd. 2337 for the years 1889–1901. For 1902–14, figures were obtained from "London Statistics" (Vol. XXVII), and comparable figures to bring these up to date from the Ministry of Labour.

The prices of oil and candles were also obtained from Cd. 2337 for 1889–1903, and the Ministry of Labour for 1919–28, the missing data for the period 1904–14 being obtained from well-known firms which supplied those commodities in those years.

With this material it was possible to construct a fuel and lighting index for the whole period, employing the same weighting as that used in the Ministry of Labour's index, viz.:

Coal . . .	60
Gas	30
Oil	4
Candles . . .	2
	96

Rentals. As explained in Chapter V, an index for working-class house-rents was constructed from (i) the material collected in the Second Fiscal Blue Book of 1903, (ii) information obtained through the Board of Inland Revenue and the L.C.C. for 1905 and 1910, and (iii) the permitted percentage increases of rent under the Rent Control Acts for post-war years.

To obtain a continuous annual series for use in the combined index, equal percentage increases (or decreases) in rents were assumed for those years in which figures were not actually available. (This was the method used by the Board of Trade in 1903.) To allow for decontrolled houses interpolation for post-war years was based on the figure for 1920 (when all rents were "controlled") and that for 1928 corrected for the inclusion of uncontrolled houses. (See Chapter V, p. 150.)

Clothing. A continuous series of figures relating only to London is not available for clothing, and for this reason and because of the special difficulties inherent in a clothing index-figure, this item is dealt with fully in the text. The sources of the figures used are Cd. 2337 (1904) and the 19th Abstract (Cd. 3140, 1928), pp. 130–34.

Combined Index. The material above was combined to form a Cost of Living Index by weighting the components in the same proportions as used for the U.K. "official" index.

Food . . .	15
Fuel and lighting .	2
Rentals . . .	4
Clothing . . .	3
	24

(*b*) Other Objects of Expenditure.

The figures relating to objects of expenditure other than prime necessities were only obtained after a good deal of special inquiry, and their main sources are indicated in the text. The following additional notes are necessary, however.

Beer. Statistics of the production of beer in London between 1891 and 1928 were secured by the courtesy of the Customs and Excise Department: since these related to the Collections Area, an area larger than Greater London, and one which has changed more than once in the period considered, they were reduced to a *per capita* basis by a special calculation. The probable change in the consumption of beer, however, could only be deduced with the aid of certain approximate estimates (relating to Greater London) kindly secured by the Brewers' Society. The figures are given below.

Beer Production in London (Collections Areas) (per head of Population).

Year.	Bulk Gallons.	Standard Gallons.
1892	—[1]	44·1
1901	42·0	42·3
1911	40·0	39·7
1921	28·5	21·7
1928	26·8	21·3

It is estimated that of the beer produced in Greater London to-day about 20 per cent. is sent out from that area: of the beer consumed in London, 25 to 30 per cent. is produced outside. It is therefore possible to arrive at a first approximation of the present consumption per head. This calculation gives consumption for 1928 as 23 or 24 standard gallons per head.

The amount of beer sent out from London is estimated to be some 35 per cent. less, and the amount of beer brewed outside and sent into London 40 per cent. less than in the 'nineties. Hence the same method of calculation, with the appropriate adjustments, gives consumption for 1892 as 45 or 47 standard gallons per head. Having regard to the approximate basis of the estimate, it may be stated roughly that consumption per head, measured in standard gallons, has decreased by something like one-half (say from 46 to 23 gallons per head).

As in the meantime the strength of London-brewed beer has diminished, the proportionate reduction of consumption, measured in bulk gallons, has been somewhat less, i.e. approximately in the relation of 10 to 6.

Transport (i) *Tramways.* The average charge made per passenger per mile, the best unit for measuring general levels of passenger fares, was calculated for 1895 on the basis of the total length of the tramway routes operated within the County and the fares charged for travelling

[1] Information not available.

from end to end of these routes. For later years an average "stage-mile" fare was calculated, from the average distance of 1*d.*, 2*d.*, and 3*d.* stages, this being also the method adopted by the Ministry of Transport since 1919. The average rate for workmen's fares on the L.C.C. trams could not be calculated for 1909–13, because although the fares were fixed at 1*d.* single and 2*d.* return, these rates remained unaltered while the tramway system was greatly extended. The average stage-mile fare, however, must have been very low: just before the war a workman was able to travel as much as 20 miles for 2*d.*

(ii) *Omnibuses.* For these fares the data, relating to average receipts per passenger mile for 1895, and to the average rate per mile for the years 1913–29, were supplied directly by the London General Omnibus Company. The cheap mid-day facilities (which were put in operation shortly after they were begun on the trams, in 1922) were not taken account of in the calculations, as being unimportant in the question of getting to and from work.

(iii) *Trains.* In data relating to train fares, whether on the Underground or the ordinary main-line trains, the distinction between standard, season-ticket, workmen's, and reduced-rate (week-end tickets, etc.) fares must be kept in mind. The last of these is a post-war feature whose importance may be measured by the fact that (in Great Britain) of passengers other than workmen and season ticket holders, 61 per cent. travelled at reduced fares in 1928.

Season ticket rates were not brought into the calculations on the ground that they concern only a small proportion of the working classes (although in any case they raise special difficulties, such as estimation of the mileage for which the rates must be considered as being paid). For workmen's tickets, mileage rates for Britain as a whole were alone available for the post-war period. The pre-war figures are average mileage rates for workmen's fares over distances not exceeding 20 miles to each important main line railway terminus in London, for a given month: for 1928, the figure used is the average receipts per mile for workmen's fares on the four main railways, weighted according to passenger miles on each railway.

CHAPTER IV

THE MOVEMENT OF WAGE RATES, HOURS OF LABOUR, AND AVERAGE EARNINGS IN LONDON

One of the most important connecting links to establish between the present-day conditions of London Life and Labour and those which prevailed at the time of Charles Booth's Survey is an index of the course of wages, earnings and hours of labour for London work-people during the intervening period. For such an index, combined with the index of cost of living, would afford an effective, if rough-and-ready, test of the improvement or deterioration of the average economic condition of London labour.

Changes in cost of living have already been explored in Chapter III. We are therefore able in the present chapter to simplify the problem, by confining attention in the first place to money wages and earnings, and afterwards qualifying the results by combining them with the cost of living index, so as to arrive at an estimate of the movement of "real" wages and earnings, as measured by their purchasing power.

Even with this simplification the problem is sufficiently complex. There are, in fact, several avenues of approach to the investigation of changes of wages, each having its own special advantages or drawbacks, according to the point of view from which the problem is regarded, and the nature of the question to which an answer is sought. It is desirable to consider these different points of view in order.

(1.) We may inquire what change has taken place

in the money value of London labour of a given character, degree of skill and duration. This is the most appropriate form in which to state the problem as it presents itself to the employer desirous of estimating the change in his labour costs.

(2.) We may inquire what has been the change in the average weekly money income of a London wage earner employed on the same kind of work, either on full time, or with due allowance for overtime and time lost. This is the form of the problem as it presents itself to a workman of given grade, anxious to maintain or improve the standard of comfort of his family.

(3.) We may inquire what has been the change in the average weekly earnings of London wage-earners as a whole or in some particular group of industries, whether derived from time or piece-work, and irrespective of the actual hours worked, or of the particular occupation in which they are engaged.

This is an aspect of the problem of wages and earnings which is of great interest and importance to the social observer, but unfortunately, the existing data for this kind of calculation are much more scanty and less satisfactory than those available for movements in the time-rates of wages, whether measured by the hour or by the week.

Even in the matter of comparisons of wage-rates the difficulties of obtaining comparable data over a long period are such that it is necessary to be content with very partial indications. Fortunately this is a matter in which it is possible, without great risk of error, to generalise from a comparatively limited number of representative wage-rates. The upward and downward movements of rates of wages in different occupations are not independent and haphazard variations, but are very frequently, though not of course always, connected with the same general economic causes which govern the movements of credit, prices and production. These causes operate over a wide area, and tend to affect wages in a large number of diverse occupations in the same

direction, though not necessarily to the same extent. For example, there is evidence that in London, as in the country generally, money rates of wages for unskilled labour have risen more rapidly than those for skilled craftsmen, and that wages have risen less in industries directly exposed to the full blast of foreign competition than in more sheltered trades, while the emergence and growing importance of the class of "semi-skilled" workers in mechanical industries with wage-rates intermediate between those of the craftsman and the unskilled labourer is one of the outstanding features of recent industrial history.

Notwithstanding these special features the broad fact that wages-rates tend to rise and fall together greatly limits the chance of error in basing a wages index on a sample, provided that the three main categories of occupations (skilled, unskilled, semi-skilled) and both groups of industries (sheltered and exposed) are adequately represented in the sample.

The data for a comparative index of wages and hours of labour in the London area are assembled in Tables I, II and III on pp. 132–137.[1] The sources from which they have been compiled are fully stated in the note on p. 140 which also explains the methods adopted. Generally speaking, an endeavour has been made to obtain particulars with regard to weekly or hourly rates of wages, and weekly hours of labour prevailing in the London area at specified dates for occupations for which there is a continuous record.

In order to economise space the figures given in the tables relate only to selected years, which (except for the war period which is left blank) are at four-yearly intervals. The object was to include each of the years 1906, 1924 and 1928, in respect of which official inquiries into earnings have been made, as well as the year 1894, which, besides being approximately

[1] In these tables weekly rates of wages have where necessary been converted into hourly rates (or *vice versa*) by the aid of the data as to hours assembled in Table II.

the mean date of Charles Booth's Industrial inquiries, was also the starting point for the series of comparable data compiled by the Board of Trade. As will be seen below it makes little difference, so far as concerns money-wages and hours of labour, whether the comparison start from 1894 or 1890. There was however a decided fall in prices between 1890 and 1894, which resulted in an appreciable rise of "real" wages during that interval.[1]

It will also be found, for reasons given on p. 125, that the "datum" year for comparative statistics of earnings (as distinct from wages) is bound to be 1886.

For these reasons it has been thought desirable to endeavour to carry back the comparison of wage-rates to 1886 and 1890, although the data available for this purpose are more scanty[2] and sometimes less trustworthy than those obtainable from 1894 onward. Such tests however as it has been found possible to apply, show that indices of movement based on these narrower data compare fairly well for the earlier years of the period with those based on the wider data available from 1894 onward.

In the tables of wages and hours which follow, the year 1894 from which the broader comparison starts is treated as the "datum" year, the narrower indices for 1886 and 1890 being shown in brackets, as percentages of 1894.

The Movement of Hourly Rates of Money Wages

It is convenient to begin with the simplest of the comparisons, by tracing the movements which have taken place in the average money value of labour of a given duration, or in other words, the average hourly rate of wages in the London area. The data for this purpose are given in the table on p. 132 for thirty-five

[1] See p. 123.

[2] They cover 22 as compared with 35 occupations.

occupations, of which twenty may be regarded as skilled and the rest as semi-skilled or unskilled (see note p. 140). So far as concerns the skilled and unskilled occupations the table is summarised below, in the form of index numbers, based on the rates current in 1894.

HOURLY MONEY WAGE-RATES IN LONDON, 1886–1928.

	1886.	1890.	1894.	1898.	1902.	1906.	1910.	1914.	1920.	1924.	1928.
Skilled	(96)	(97)	*100*	104	103	108	109	114	292	222	226
Unskilled	(86)	(97)	*100*	101	102	102·5	109	115	369	260	272
Skilled and Unskilled	(92)	(97)	*100*	103	102	106	109	115	323	237	244

The last line is obtained by weighting skilled and unskilled in the ratio 3 to 2, i.e. roughly in proportion to the average rates for skilled and unskilled labour.

THE MOVEMENTS OF WOMEN'S WAGES

The limitation imposed by the necessity of obtaining comparable figures over a long period of time has excluded the possibility of tracing the course of women's hourly rates of wages by means of an index number, since in a large number of occupations followed by women there has been no generally agreed time-rate basis, at all events before the enactment of the Trade Boards Act of 1910. That Act aimed expressly at raising the standard of earnings in the so-called "sweated" industries, which figured very prominently in Charles Booth's inquiries, and the recent course of minimum wages in the industries subjected to Trade Boards could not therefore be safely regarded as typical of the course of women's wages generally in the last twenty years. It is therefore purely by way of illustration that the following figures are quoted. In the ready-made and wholesale bespoke tailoring trade—the most important of the London industries to which the Trade Boards Act was originally applied—the lowest rates of women's wages in Charles Booth's time (1890) varied very widely, from 1*d.* an hour upwards to 2½*d.* or 3¼*d.* In 1912 the Trade Board imposed a minimum of 3¼*d.*, which by 1928 had

been changed to 7*d.*[1] In the paper box trade, where the minimum in 1890 varied from 1½*d.* to 2¾*d.* an hour, the first minimum rate fixed by the Trade Board in 1913 was 3*d.*, which by 1928 had been raised to 7⅜*d.* These figures, so far as they go, show that the rise in hourly rates of money wages for women's work in the lower-paid industries since the War has been something like 130 per cent. or more, a rate of increase corresponding fairly closely with that of unskilled occupations generally. It may be added that in 1928 the minima rates fixed by Trade Boards from thirty-three occupations ranged from 6*d.* to 10*d.* an hour, the most common rates (half of the total number) being 7*d.* and 7½*d.*

The Movement of Hours of Labour

The significance to the workman and his family of the great increase in the money value of hourly wages is qualified by two factors: (1) the diminished purchasing power of money, or (inversely) the increase of the workman's cost of living; (2) the diminished number of hours which constitute a full week's work. The former factor was examined at length in Chapter III, from which it appears that during the interval between the triennial periods 1889–91 and 1926–28, the money cost of a London workman's necessaries of life has risen by between 80 and 87 per cent. The second factor can be measured with the aid of the statistics of London hours of labour collected in Table III. The occupations to which these statistics relate are (for the most part) the same as those covered by Table I, and they show a decline as between 1890 and 1928 of just under 12 per cent. for skilled and over 17 per cent. for unskilled occupations, the mean for skilled and unskilled occupations being nearly 15 per cent.

The effect of the table is shown in the following summary giving an index of changes in the average number of hours constituting a full week's work in London at certain dates.

[1] In the abnormal year 1921, the minimum rate was 8½*d.*

INDEX OF WEEKLY HOURS PREVAILING IN LONDON, 1886–1928.

	1886.	1890.	1894.	1898.	1902.	1906.	1910.	1914.	1920.	1924.	1928.
Skilled	(102)	(102)	*100*	99·1	98·7	99·1	99·1	98·4	90·1	90·7	90·1
Unskilled	(102)	(102)	*100*	100·1	100·1	99·9	99·9	99·7	84·0	84·5	84·0
Mean of Skilled and Unskilled	(102)	(102)	*100*	99·6	99·4	99·5	99·5	99·0	87·0	87·6	87·0

Reference to the Table on p. 134 shows that the decrease of hours affected all of the occupations represented therein except four, which had already introduced a forty-eight hour week before 1894. The average rate of decrease since the last-mentioned date has been about 13 per cent.

The reduction of hours has been almost entirely a post-war phenomenon, though there was an appreciable shortening of hours in the building trades between 1890 and 1894. Out of the 32 occupations in Table II, 15 showed no downward change between 1894 and 1914, and in 10 of the others the change did not exceed 3 per cent. The bulk of the total reduction took place in the years immediately following the war; since then the movement has practically ceased, the hours recorded in 1920 being in all cases the same as in 1928, though between the years 1920 and 1928 there was a temporary upward and downward movement of average hours in the London building trade sufficient to cause a slight fluctuation in the general Index.

From the special point of view of the present survey of conditions of London life and labour, the significance of the shortening of hours does not lie so much in its influence on cost of production and competitive power as in its effect in increasing the workman's leisure time. The expansion of the daily margin of hours unoccupied by work, travel to and from work, meals and sleep inevitably gives increasing prominence to the group of problems concerned with the use of leisure.

Roughly speaking, the average London worker has now an extra hour a day to himself as compared with

the time of the Booth Survey. The increasing tendency to live at a distance from the place of work may have led in some cases to a greater consumption of time in necessary travel, but on the average this has been largely offset by the increased swiftness of locomotion.

How the extra hour of leisure is spent is clearly an important matter to be explored in connection with every survey of London Life and Labour, and the figures stated above give added importance to the data assembled in Chapter IX with regard to the growth of certain important categories of London amenities, and means of recreation.

The Movement of Weekly Time-rates of Money Wages

The movement of weekly time-rates of wages in London has on the whole been an upward movement, though of course not so rapid as the rise of hourly rates. It is naturally the movement of weekly, rather than of hourly, rates which is chiefly significant in relation to the workman's standard of living.

The course of weekly time-rates from 1894 to 1924 is set out for a large number of occupations in Table III on p. 136, which also shows the weekly time-rates for a more limited number of occupations for 1886 and 1890. The sources are the same as those from which the Table of hourly rates was derived. The net result is shown in the following summary so far as concerns the two main groups of skilled and unskilled. As already explained, 1894 is treated as the "datum" year, and the indices for 1886 and 1890 are shown in brackets.

Index Number of Weekly Time-rates of Wages for Skilled and Unskilled Labour in London.

	1886.	1890.	1894.	1898.	1902.	1906.	1910.	1914.	1920.	1924.	1928.
Skilled .	(98)	(99)	*100*	102·5	107·5	107	108	112	263	202	204
Unskilled .	(87)	(99)	*100*	101·5	102	102	108	114	310	218	228
Skilled and Unskilled	(94)	(99)	*100*	102	105	105	108	113	282	208	214

The two partial index-numbers for skilled and unskilled work are constructed by taking the arithmetic mean of the rates for the various occupations, without any attempt at weighting. They are therefore only approximately correct, but, in view of the considerations already set forth with regard to the movement of hourly rates, it is believed that the margin of error due to the omission of weighting is not great.

It appears from the summary that on the whole the weekly rates of wages for skilled occupations in London have increased by about 106 per cent. since 1890, while those for unskilled labour have risen by 130 per cent. The combined percentage for skilled and unskilled occupations included in the Table is about 116, or considering the approximate character of the data (say) between 110 and 120. The combined index is obtained by the same process of weighting as in the case of hourly rates.

It is important however to remember that this index only affords a direct measure of the increase in time-rates, and that in some important groups of industries there has been a marked increase in the proportion of workers paid by results. The weekly wages earned by the latter classes of workers are often considerably higher than those of the time-workers: e.g. in the engineering trades the average difference in 1928 was found as the result of a special inquiry to be no less than twelve shillings a week. Even if the rate of increase in the average wages of piece workers were no greater than those of time-workers, the extending practice of payment by results must of itself have resulted in accelerating the rise of wages.

Factors such as this, as well as changes in the prevalence of overtime and short time, and in the percentage of total unemployment, can only be fully taken into account in connection with an index of earnings. Nevertheless the movement of weekly time-rates of wages, taken in conjunction with the movement of cost of living, affords a very significant index of changes in the economic condition of a great proportion of London workers.

Occupations in which time-rates of payment are predominant still give employment to the majority, probably not less than three-quarters of London workers.

In these circumstances the force of competition can hardly have failed to cause the average conditions prevailing in other occupations to keep step, more or less, with those of the great groups of occupations in which time-rates prevail, except of course where the rate of change has been affected by the special circumstances of a particular industry or grade of workers. But such special circumstances are not confined either to time or to piece-workers, and over the whole mass of London wage-earners they must tend to cancel out.

For these reasons it is believed that the index of movement of weekly rates of wages already given, though based on time-rates only, must, within comparatively narrow limits of error, afford a fair measure of the percentage rise in the money value of a full week's work for identical work in London trades and industries generally.

If we turn from the general movement of wages to the movement in particular occupations, we find a great divergence between skilled and unskilled occupations, as well as between occupations, whether skilled or unskilled, concerned with different types of production. For example, the time-rates of money-wages of skilled workmen in the engineering trades have risen by about two-thirds, while those in the building trades have about doubled in amount. Meanwhile the time-wages of labourers in the engineering trade have more than doubled and in the building trade have increased by over 120 per cent., while those for dock labourers and carters have risen by 130 to 140 per cent.

The great discrepancy between the apparent rise of wage-rates in the engineering and certain other skilled trades is doubtless partly due to the fact that, as already explained, the movement of time-rates gives a very inadequate measure of the rise of engineering wages and earnings.

The disproportionate rate of increase of the wages of unskilled labour has been entirely a post-war phenomenon. Up to the outbreak of the war the average percentage rise in the weekly rates for unskilled workers in London was not noticeably greater than for the skilled trades. As between 1914 and 1928 however the percentage rise for unskilled labour has been 100 as compared with 82 for skilled occupations.

The accelerated rise of wages of lower paid workers arose originally from the necessity of allowing for the rapid rise in the cost of prime necessaries during the war. The "war bonus" to compensate for this rise in cost of living naturally took the form of a "flat" addition to wages, which yielded a higher proportionate advance for unskilled than for skilled workers. Although, translated into percentages, the increases in labourers' wages have exceeded those in skilled trades, the actual addition of purchasing power has on the whole been approximately the same.

The social and economic results of the change thus made in the relation between the levels of wages in unskilled and skilled occupations have been of the highest importance, in relation not only to industrial costs but also to the social and economic condition of the less highly paid grades of labour.

The effect on industrial costs, which is not of course peculiar to London, has been so fully discussed elsewhere[1] that it is unnecessary to enter into it here at length. In London, as in the country generally, it is true to say that the new and as yet somewhat precarious relation between the rates of remuneration for different grades of skill, which is in the main a legacy from war conditions, requires for its permanent stabilisation a great increase in economic "fluidity," and the breaking down of the customary barriers which in the past have separated the categories of "skilled" and "unskilled" labour and which have often hindered the less skilled

[1] Balfour Committee on Industry and Trade: *Further Factors in Industrial Efficiency*, p. 90 *et seq.*

workers from fulfilling the functions of which they are capable in the changed conditions of industrial organisation.

For a survey of London Life and Labour however the main interest of the changed relation between wages of skilled and unskilled occupations lies in the fact that the lowest paid strata of labourers—those grades that in Charles Booth's inquiry were placed at or below the "poverty line,"—have proportionately benefited most from the rise. It is shown below that the increase in the money rates of wages for unskilled labourers in London means a rise of over a quarter in the real purchasing power of their wages, and a still greater proportionate rise in "real" earnings. Such an increase must evidently have had a marked effect on the distribution of the population of London among the different categories of Charles Booth's analysis, and in particular on the proportion of the population living below the "poverty line." Until the new Survey is complete, it is of course impossible to say exactly what this effect has been, but it would be a fairly safe prediction that it will be found to have raised the grade of those whose poverty was caused by the low level of regular wages, much more than that of the "casuals," whose poverty was due to intermittent employment rather than to low rates of hourly pay.

Casual labour has long been one of the tap-roots of London poverty, especially in the river-side districts, and it is possible that the great rise of the hourly rates of pay of casual labourers, while alleviating the distress arising from their poverty, may even have increased the already formidable difficulties of the only real cure, viz. the replacement of casual by permanent engagements.

The Movement of "Real" Time-rates of Weekly Wages

In the course of the previous paragraphs we have had occasion to make use of the cost of living index

for the purpose of interpreting money rates of wages in terms of their real purchasing power. It is of course the amount of "real" wages rather than their nominal money value which is of importance in relation to the workman's standard of living, though the movement of money rates is so much more obvious and easily understood, that it usually appeals more forcibly to the imagination of those unused to statistical calculations.

The movement of "real" weekly time-wages in London is shown in the following summary Table from 1886 to 1928, the datum year from which the percentage movement is calculated being 1894 as before. For the relation of the movement of "real" to "money" wages this Table should be compared with that on p. 118, from which it is constructed by applying the Cost of Living index to the indices of money-rates:—

INDEX NUMBER OF REAL WAGES (WEEKLY TIME-RATES) IN LONDON, 1886–1928.

	1886	1890	1894	1898	1902	1906	1910	1914	1920	1924	1928
Skilled .	(92)	(95)	*100*	99·5	101	99·5	95	96	83	99	108
Unskilled .	(81)	(94·5)	*100*	98·5	96	95	96	97	98	108	121
Skilled and Unskilled (weighted average) .	(88)	(95)	*100*	99	99	98	95	96	98	103	113

It will be seen that roughly speaking the average "real" rate of weekly wages for skilled occupations is now higher than in 1894 by one-twelfth, and that for unskilled occupations by over one-fifth, the weighted average increase for all the skilled and unskilled occupations included being approximately 13 per cent. In comparison with 1890 however the increase is much more marked owing to the fall in the cost of living between 1890 and 1894. The average rise of real time-wages since 1890 is nearly one-fifth (one-seventh for skilled and over a quarter for unskilled occupations).

The Movement of Earnings (Monetary and Real)

From the question of weekly and hourly time-rates of wages, we now turn to the much more complex and difficult problem of the movement of average weekly earnings, during the same period.

The difficulties are two-fold, arising from the complexity and ambiguity of the definition of "earnings," and the paucity and defects of the available data.

By "weekly earnings" is meant the average weekly amount of the remuneration received by an employed worker one week with another, including piece-work as well as time-work, and allowing for overtime, short time, and short absences from work whether voluntary or involuntary. The usual method of computation is to divide the total wages bill of selected weeks by the total number of workpeople on the pay-roll. Sometimes the result of the calculation is an "over-all" figure irrespective of sex or age. In other estimates there is a division by sex or by age or by both. But in all large-scale inquiries into earnings of which the results are available, the participants among whom the total wages paid is divided are the workpeople whose names are on the pay-roll. This is inevitable if the estimate is based on returns from employers, and the result is very much nearer the truth than that of the only available alternative, i.e. the division of the total wages paid during some long period, e.g. a year, by the number who have been on the pay-roll at some time during that period. If the wages inquiry were extended to cover the entire wage-earning population the latter method might deserve consideration, but it is inappropriate to a sample inquiry, since many of the workpeople included are likely to have also received wages from other employers during a portion of the year.

If the source of the information were the individual workman, it might be possible to obtain a record of his net earnings after allowing for all periods when no wages were earned. This method was actually adopted

in a limited number of cases by Charles Booth. Its defects are that the workpeople who keep sufficiently trustworthy records to furnish this information are relatively few in number, and unlikely to be representative of their class. Returns on this basis are sometimes "human documents" of intense interest, as for example the monthly record of earnings of a dock-labourer for a consecutive period of seventeen years, which was published by Mr. H. A. Mess.[1] But as the author is careful to observe, "this man . . . is, as might be supposed, of superior character and intellect." Similarly many of the examples of earnings assembled by Charles Booth are of great interest, and from them much may be learned. But it has been found impossible to construct out of them a statistical average capable of affording a starting-point for a long period comparison.

We are therefore limited to the data collected with regard to earnings by the four official inquiries in 1886, 1906, 1924, and 1928. The 1886 inquiry was the first attempt made in this country to obtain statistics of earnings on a wide basis. While the experience then gained of the practical difficulties of the task was of the highest value in planning subsequent inquiries, the original inquiry naturally suffered from the defects inseparable from a first effort. In particular it is not always clear what the figures published really mean. The result is that, in order to arrive at a long period comparison based on the year 1886, it has been necessary to limit the statistics to a relatively small number of industries. The term "industries" is used advisedly, as the only available basis for a comparison of earnings is the whole industry as distinct from the separate occupations. It will be appreciated that this method of comparing the average earnings over a whole industry rather than those of identical occupations, has the important advantage, from certain points of view, of taking into account changes of industrial structure which

[1] *Casual Labour at the Docks*, pp. 41–3. The period covered is from 1896 to 1912.

modify the character of the operations performed, and consequently vary the proportions of workpeople of different categories or grades of skill required by the industry.

It is true that in applying this method we are not comparing the earnings of similar grades of workpeople, but rather the over-all average earnings of workpeople of all grades employed in the industry. It is obvious therefore that the result of an industrial comparison of earnings may differ materially from that obtained by comparing identical occupations.

The 1906 inquiry into wages and earnings was by far the most complete and satisfactory that has yet been made, and the tables published enable averages to be computed, both of wages and earnings, applicable both to occupations and industries, and separating men from women and adults from boys and girls. It is also possible to separate the London figures. The 1924 and 1928 inquiries were entirely industrial in basis, and the only subdivision that can be made is between the sexes. On the other hand, they covered a wide area of industry. No separate figures were published for London, but the Ministry of Labour have been good enough at our request to analyse the results for the London area.

Since the object of the present comparison is to bridge the gap between the present time and that of the Booth Survey, the starting-point is bound to be the inquiry of 1886, and the whole comparison must therefore be limited to industries for which that inquiry affords fairly trustworthy data.

The effect of this limitation is to restrict the long-period comparison of earnings to male workers engaged in four great London industries, viz. building, engineering, printing, and the boot and shoe trade. For part of the period comparisons of earnings in several other industries are possible, and all the available figures which have been thought sufficiently trustworthy will be found assembled in the Table on p. 138. The

sources, method of compilation, and basis of the indices of earnings and wage-rates are fully explained in the note on p. 140.

Confining ourselves for the present to the four groups of London industries for which the full period comparison can be made, we find that the average weekly money earnings of males in these industries rose by about 133 per cent. between 1886 and 1928. In the meantime the average weekly time-rates of wages *in occupations within the same four groups of industries* rose by about 115 per cent. In the building trade group the percentage rise in earnings was less than that of weekly wage-rates (106 per cent. as compared with 118), but in all the other three groups of industries the rise of earnings has been considerably more rapid than that of wage-rates. The comparison is shown in the following summary.

PERCENTAGE INCREASES OF MONEY-EARNINGS AND WAGE-RATES IN THE FOLLOWING LONDON INDUSTRIES, BETWEEN 1886 AND 1928.

Industry.	Weekly Earnings.	Weekly Time Wage-rates.
Building	106	118
Engineering . . .	99	86
Printing, etc. . . .	198	137
Boots and Shoes . .	148	94

It is significant that all the three groups in which earnings have risen faster than time-rates are industries which have been undergoing a mechanical transformation, and in which piece work has been gaining on time work.

It should however be remembered that the figures only relate to men and boys. There are, unfortunately, no sufficient materials for a long-period comparison of the wages and earnings of female workers. In three of the four groups the great majority of workers are male, but in the printing and bookbinding trades the omission of women probably makes a material difference to the result.

If the increases of weekly earnings, and of time-rates,

in the above four groups of industries be combined, by weighting them in proportion to the number of persons in each industry according to the 1921 Census, the average increases will be found to be 136 and 114 per cent. respectively. In 1921, however, the distribution of industry was still somewhat affected by war conditions. On the basis of 1911 figures the weighted averages would be 130 and 116. The mean of the figures derived from the two scales of weights gives 133 and 115.

The comparison has necessarily been confined to a limited number of industries, but it will be noted that the average rise of weekly time-rates in the four industries (115 per cent. since 1886) is materially below that for the general body of occupations included in the Table on p. 118 (viz. from 94 in 1886 to 214 in 1928, a rise of nearly 128 per cent.). It is therefore reasonable to assume that, if it were possible to extend the comparison of earnings by including a larger number of industries, the result would be to show a somewhat higher rise.[1]

The general effect, although the range of the data is limited, is to suggest that on the whole the average earnings of London workmen have been rising faster than the weekly rates of time wages in the same group of industries. The earnings figure makes allowance for all lost time except absences through sickness or unemployment lasting for at least a week. As regards time lost through sickness, the experience of friendly societies and insurance organisations shows that the proportion of working time so lost is fairly constant in normal years and amounts to about 3 per cent. of full time. And it is probable that this figure does not differ very greatly from that which obtained forty years ago.[2]

The system of compulsory health insurance secures a minimum weekly income during sickness which in Charles Booth's time was enjoyed only by the minority of workers who subscribed to friendly societies. As

[1] This is confirmed by comparing Tables IV and V on p. 138.

[2] Balfour Committee: *Survey of Industrial Relations* (1926), p. 39; Second Fiscal Blue Book (1904), p. 100; 4th Report on Trade Unions, 1891, p. 56.

regards unemployment, there are no really comparable figures, but the average rate of unemployment in 1929 for insured males in London was 6·4 per cent., and the average for the four groups of industries included in the comparison of earnings was 7·5 per cent. So far as the scanty data permit a comparison, these figures appear to be somewhat, but not markedly, above those which obtained in the same industries in London at or about the time of Charles Booth's Survey (see p. 353). At the same time the present provision for unemployment benefit is very much more complete than at the earlier period. The majority of the unemployed are not now, as then, wholly deprived of their income, but receive weekly payments varying with their families, but averaging 21*s.* 6*d.* in 1928.

In these circumstances it is reasonable to conclude that the deduction to be made from average earnings on account of sickness and unemployment is not more, but probably a good deal less, than the corresponding deduction at the time of the Booth Survey.

On the other hand, it is to be remembered that on an average the worker contributes a material though minor part of the revenue of the fund from which he receives unemployment and sickness benefits, through deductions from his wages. If however full allowance be made for the worker's contribution, it still remains probable that the net effect of unemployment and sickness on the average income of a working-class family is less at present in the London area than it was thirty or forty years ago. If therefore this factor be altogether neglected the effect is still to under-rate, rather than to over-rate, the actual increase in the average money income of the London worker. The estimate given above of this increase must therefore be regarded as a conservative one.

If the increase of money earnings be corrected for the changes of price level by applying to it the index of cost of living, it is found that between the years 1886 and 1928, the average increase of "real" earnings

in the four industries for which comparisons are possible has been about 30 per cent. This is seen from the following figures:

	Index of Weekly Money Earnings.	Cost of Living.	Index of Weekly Real Earnings.
1886 . . .	100	100	100
1928 . . .	233	179	130

For reasons already given the percentage increase is probably below the average for industries as a whole, and it is therefore a very probable conclusion that the average weekly income earned by a male worker in London (taking into account overtime, lost time and short time) suffices to purchase nearly a third more of the necessaries of life than at the time when Charles Booth's survey began, or alternatively to provide a corresponding additional sum for expenditure on fresh objects of consumption.

In addition the average recognised hours of labour in London have been reduced in the meantime by about one hour a day.

These are substantial gains, and, whatever allowance be made for the possibility of error through the insufficiency of the data, the figures show conclusively that the general tendency in recent years has been in the direction of improvement rather than of deterioration, in the material conditions of prosperity of the working population of the London area.

The statistics however deal only with averages, and do not profess to analyse the internal changes which have been taking place in the relative conditions of life and labour of the various economic strata of the London population, or in the proportions between the poorer and more prosperous grades of workers.

The averages and indices set out in this and the preceding chapter serve as a necessary introduction, but as an introduction only, to the extensive and intensive study of actual social and economic conditions which is the task of the New Survey now in progress.

They establish an indispensable link between this survey and the preceding inquiry of Charles Booth, by showing the general trend of wages and earnings in London since his time, and they furnish at once a background and a useful "control" for the analysis and local distribution of poverty and social conditions, which will form the subject matter of succeeding volumes.

It will be the object of those volumes to endeavour to ascertain how far the average improvement of material conditions in London which has certainly taken place has been reflected in a corresponding diminution of real poverty, and of its evil consequences to the life of the people; how far the average rise in "real" earnings has altered for the better what Charles Booth called "the numerical relation which poverty, misery, and depravity bear to regular earnings and comparative comfort"; and how far the additional leisure which the average workman has undoubtedly gained has resulted in a fuller and less narrow and stunted existence for the poorer members of the community.

CHAPTER IV TABLES.

TABLE I

HOURLY RATES OF TIME WAGES PREVAILING IN LONDON AT THE UNDERMENTIONED DATES.

Industry or Occupation.	1886.	1890.	1894.	1898.	1902.	1906.	1910.	1914.	1920.	1924.	1928.
	d.	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*	*s. d.*	*s. d.*	*s. d.*
Building Trades:											
Bricklayers	9	9	9½	10	10½	10½	10½	11½	2 4	1 8	1 9
Masons	9	9	9½	10	10½	10½	10½	11½	2 4	1 8	1 9
Carpenters and joiners	9	9	9½	10	10½	10½	10½	11½	2 4	1 8	1 9
Plumbers	10	10	10½	11	11	11	11	12	2 4½	1 8	1 9½
Plasterers	9	(9)	9½	10	11	11	11	11½	2 4	1 8	1 9
Painters (higher grade)	8½	8½	9	9	9	9	9	10	2 3	1 7	1 8
Labourers	5¾	(6)	6½	7	7	7	7	8	2 1	1 3	1 4
Derrick drivers	8½	8½	8½	9	9	9½*	9½*	10	2 3	1 6½	1 8½
Engineering and Metal Trades:											
Fitters and turners [1]	*8·4*	*8·4*	*8·4*	*8·4*	*8·7*	*8·7*	*8·9*	*9·0*	*2 0*	*1 3·6*	*1 4·1*
Smiths, planers, slotters, etc.	*8·4*	*8·4*	*8·4*	*8·4*	*8·7*	*8·7*	*8·9*	*9·0*	*2 0·5*	*1 3·6*	*1 4·1*
Ironmoulders	*8·4*	*8·4*	*8·4*	*8·4*	*9·3*	*9·3*	*9·5*	*9·5*	*1 11·7*	*1 3·6*	*1 4·1*
Engineer's labourers	—	—	*4·7* [2]	*4·7*	*4·9*	—	—	*5·8*	*1 7·1*	*0 11·0*	*0 11·6*
Brass finishers	*8·4* [3]	*8·4*	*8·4*	*8·4*	*8·7*	*8·7*	*8·9*	*9·0*	*2 0*	*1 3·6*	*1 4·1*
Farriers (firemen)	9	(9)	9	*9·1* [6]	*9·5*	*9·5*	*9·5*	*9·7*	*2 0·1*	*1 7·4*	*1 7·0*
Electrical Trades:											
Wiremen [4]	—	—	8–9	8½–9½	9½	9½	9½	10½	2 6	1 10	1 9½
Labourers	—	—	6½	6½	6½	6½	6½	6½	1 9	1 3½	1 5*
Furnishing and Woodworking:											
Cabinet makers	8–9	9	9	9½	10½*	10½*	10½*	11½*	2 3½	1 9	1 9
French polishers	7	8	8	9*	9*	9	9	9½	2 3½	1 8½	1 8½
Upholsterers	—	—	8–9 [7]	—	9–12	9–12	9–12	10½–12	2 3½	1 9	1 9
Wheelwrights	—	—	*8·4*	9½	9½	9½	—	—	2 0‡	1 6½‡	1 6½‡

Printing and Allied:											
Compositors (book and jobbing), hand	8·0	8·0	8·4	8·4	8·7	8·9	8·9	8·9	1 11·7	1 10·2	1 10·2
Compositors (book and jobbing), machine	—	—	10·5	11·2	11¼	11¼	11¼	11¼	2 1	2 0	2 0
Bookbinders	6·7	7·1	8·0	8·0	8·0	8·0	8·7	8·7	1 11·1	1 8	1 8
Lithographic printers	8·9	8·9	8·9	8·9	8·9	8·9	8·9	8·9	1 11·7	1 8·6	1 8·6
Boot and Shoe Trade:											
Clickers	—	—	6·7 [5]	6·7	6·7	6·7	6·9	6·9	1 5	1 3	1 2
Lasters	—	—	—	—	—	6·7	6·9	6·9	1 5	1 3	1 2
Finishers	—	—	—	—	—	6·7	6·9	6·9	1 5	1 3	1 2
Pressers	—	—	5·5 [5]	5·5	5·5	6·2	6·2	6·2	1 4·2	1 2·2	1 2
Bread, Baking, etc.:											
Table hands	—	—	4·8	5·1	5·1	5·1	5·1	7·1	1 6	1 3	1 4·2
Single hands	—	—	5·7	6·0	6·0	6·0	6·0	7·6	1 7	1 5·2	1 5·2
Transport:											
Dock labourers: quay, or by P.L.A.	5	6	6	6	6	6	7	7	2 0	1 6	1 6
Dock labourers: shore, or by ship owners	6	7	7	7	7	7	8	8	2 2	1 8	1 8
Carters: "heavy singles"	—	—	5·0‡	5·0	5·0	5·2	5·2	5·6	1 4·5	1 1·5	1 2·5
Postmen (at 25 years of age)	6·1	6·5	6·5	7·5	7·5	7·9	7·5	7·7	1 8	1 3·3	1 2·4
Policemen (after 5 years' service)	6·9	7·2	7·2	7·2	7·6	7·6	7·6	8·0	1 9	1 8	1 8

For further notes relating to calculated figures (italics), see basic figures (other Tables). Estimated rates in brackets. * Higher of 2 rates. ‡ Minimum or lower limit.

[1] A number of firms (and the L.C.C.) paid rates of 8½*d.* and 9*d.* an hour to fitters, smiths, brassfinishers, etc., 1886–98.

[2] In some cases, 6*d.* an hour was a recognised rate for engineer's labourers.

[3] A.E.U. rates: 8½*d.* and 9*d.* an hour was the recognised basis in certain classes of work.

[4] L.C.C. schedules are the only source of information before 1914.

[5] 1895.

[6] Taking 40*s.* as representative weekly wage, from range 36*s.* to 42*s.*

[7] Booth gives 8*d.*–9*d.* as rates of "by far the greater number" of upholsterers.

TABLE II

PREVAILING NUMBER OF HOURS CONSTITUTING A FULL WEEK'S WORK IN LONDON, AT THE UNDERMENTIONED DATES.

Industry or Occupation.	1886.	1890.	1894.	1898.	1902.	1906.	1910.	1914.	1920.	1924.	1928.
Building Trades: [1]											
Bricklayers	51·3	51·4	48·8	49	49	48·5	48·5	48	44	45	44
Masons	51·0	51·0	48·8	49	49	48·5	48·5	48	44	45	44
Carpenters and joiners	51·0	51·0	48·8	49	49	48·5	48·5	48	44	45	44
Plumbers	46·3	46·3	45·9	46·1	46·1	48	48	47·5	44	45	44
Plasterers	51·0	51·0	48·8	49	49	48·5	48·5	48	44	45	44
Painters	51·4	51·4	48·8	49	49	48·5	48·5	48	44	45	44
Labourers	51·0	51·0	48·8	49	49	48·5	48·5	48	44	45	44
Engineering and Metal Trades:											
Fitters and turners	54	54	54	54	54	54	54	54	47	47	47
Smiths, planers, slotters, etc.	54	54	54	54	54	54	54	54	47	47	47
Ironmoulders	54	54	54	54	54	54	54	54	47	47	47
Engineer's labourers	—	—	54	54	54	54	54	54	47	47	47
Brassfinishers	54	54	54	54	54	54	54	54	47	47	47
Farriers (firemen)	54	54	54	53	53	53	53	48–56½ [2]	47	47	47
Electrical Trades:											
Wiremen	—	—	54	54	54	54	54	54	47	47	47
Labourers	—	—	54	54	54	54	54	54	47	47	47
Furnishing and Woodworking:											
Cabinet makers	55	52–6	52–6 [3]	52½	50	50	50	50	47	47	47
French polishers	55½	55½	55½	52½	52½	52½	52½	50	47	47	47
Upholsterers	—	—	(54) [12]	—	50–55 [3]	50–55	50–55	50–55	47	47	47
Wheelwrights	—	—	54	— [4]	—	—	—	—	47	47	47

Printing and Allied:											
Compositors (book and jobbing), hand	54	54	54	54	52½	52½	52½	52½	48	48	48
Compositors (book and jobbing), machine	—	—	48	48	48	48	48	48	48	48	48
Bookbinders	54	54	48	48	48	48	48	48	48	48	48
Lithographic printers	54	54	54	54	54	54	54	54	48	48	48
Boot and Shoe Trade:											
Clickers	—	—	54	54	54	54	52½	52½	48	48	48
Lasters	—	—	—	—	—	54	52½	52½	48	48	48
Finishers	—	—	—	—	—	54	52½	52½	48	48	48
Pressers	—	—	54	54	54	54	52½	52½	48	48	48
Bread, Baking, etc.:											
Table hands	—	(70)	70 [5]	66 [6]	(66)	(66)	(66)	54 [7]	48	48	48
Single hands	—	(70)	70	(66)	(66)	(66)	(66)	54 [7]	48	48	48
Transport:											
Dock labourers: [8] quay, or by P.L.A.	— [9]	10 [9]	10	10	10	10	10	10	8	8	8
Dock labourers: shore, or by ship-owners	— [9]	10 [9]	10	10	10	10	10	10	8	8	8
Carters, "heavy singles"	—	—			60–72 [10]				48	48	48
Postmen (at 25 years of age)	48	48	48 [11]	48	48	48	48	48	48	48	48
Policemen (after 5 years' service)	48	48	48 [11]	48	48	48	48	48	48	48	48

[1] Average of "summer" and winter hours, e.g. in 1894, of 50 summer (38 weeks), 47 (6 weeks) and 44 (8 weeks) winter.
[2] Average (52 hours) taken for index and for calculations. [3] Average taken for calculations.
[4] L.C.C. schedules relate to wheelwrights working same hours as in building trades.
[5] Lower limit of range given by Charles Booth (70–80). [6] Minimum figure communicated by Ministry of Labour.
[7] 48 in some bakeries. [8] Daily hours.
[9] Maximum, beyond which overtime rates paid. Up to 1889 hours were so irregular that no figure can be stated.
[10] Hours varied from 60 upwards 1894–1914: 72 maximum in 1914. [11] Nominal 8-hour day throughout.
[12] Charles Booth gives hours of upholsterers as "practically same as cabinet makers."

TABLE III

MONETARY RATES OF WEEKLY TIME WAGES PREVAILING IN LONDON FOR A FULL WEEK, AT THE UNDERMENTIONED DATES.

Industry or Occupation.	1886.	1890.	1894.	1898.	1902.	1906.	1910.	1914.	1920.	1924.	1928.
Building Trades:	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Bricklayers	38 6	38 7	38 8	40 10	44 11	42 5	42 5	46 0	102 8	75 0	77 0
Masons	38 3	38 3	38 8	40 10	44 11	42 5	42 5	46 0	102 8	75 0	77 0
Carpenters and joiners	38 3	38 3	38 8	40 10	44 11	42 5	42 5	46 0	102 8	75 0	77 0
Plumbers	38 7	38 7	40 2	42 3	42 3	44 0	44 0	47 6	104 6	75 0	78 10
Plasterers	38 3	(38 3)	38 8	40 10	44 11	44 5½	44 5½	46 0	102 8	75 0	77 0
Painters	36 5	36 5	36 7	36 9	36 9	36 4½	36 4½	40 0	99 0	71 3	73 4
Labourers	24 5	25 6	26 6	28 9	28 9	28 3½	28 3½	32 0	91 8	56 3	58 8
Derrick drivers [1]	36 2	36 2	34 7	36 9	36 9	38 3	38 3	40 0	99 0	69 4½	75 2
Engineering and Metal Trades:											
Fitters and turners	38 0	38 0	38 0	38 0	39 0	39 0	40 0	40 6*	93 10*[3]	60 11	62 11
Smiths, planers, slotters, etc.	38 0	38 0	38 0	38 0	39 0	39 0	40 0	40 6*	96 0	60 11	62 11
Ironmoulders	38 0	38 0	38 0	38 0	42 0*	42 0*	43 0*	43 0	92 10	60 11	62 11
Engineer's labourers	—	—	21 0[2]	21 0[2]	22 0[2]	—	—	26 0*	74 10[3]	43 3½	45 3½
Brassfinishers [5]	38 0	38 0	38 0	38 0	39 0	39 0	40 0	40 6*	93 10*	60 11	62 11
Farriers (firemen)	40 6	40 6	40 6	36–42/–[4]	42 0	42 0	42 0	42 0	94 6	76 10½	74 6
Electrical Trades:											
Wiremen	—	—	38 3	40 6	42 9	42 9	42 9	47 3	117 6	86 0	84 6
Labourers	—	—	29 3	29 3	29 3	29 3	29 3	29 3	82 3	60 8½	66 7
Furnishing and Woodworking:											
Cabinet makers	39 0	40 6	40 6	41 7	43 9	43 9	43 9	47 11	107 9	82 3	82 3
French polishers	32 5	37 0	37 0	39 5	39 5	39 5	39 5	39 9	107 9	80 3½	80 3½
Upholsterers	—	—	38 3[6]	—	46 11[7]	46 11	46 11	49 2½	107 9	82 3	82 3
Wheelwrights	—	—	36–40/–[8]	38 10	38 10	—	—	—	94 0	71 7½	71 7½
Printing and Allied:											
Compositors (book and jobbing), hand	36 0	36 0	38 0	38 0	39 0	39 0	39 0	39 0	95 0	89 0	89 0

Compositors (book and jobbing), machine . .	—	—	42 0	45 0	45 0	45 0	45 0	45 0	100 0	96 0	96 0
Bookbinders	30 0[10]	32 0[9]	32 0	32 0	32 0	32 0	35 0	35 0	92 6	80 0	80 0
Lithographic printers .	40 0	40 0	40 0	40 0	40 0	40 0	40 0	40 0	95 0	82 6	82 6
Boot and Shoe Trade:											
Clickers	—	—	30 0[11]	30 0	30 0	30 0	30 0	30 0	68 0	60 0	56 0
Lasters	—	—	—	—	—	30 0	30 0	30 0	68 0	60 0	56 0
Finishers	—	—	—	—	—	30 0	30 0	30 0	68 0	60 0	56 0
Pressers	—	—	25 0[11]	25 0	25 0	27 0	27 0	27 0	65 0	57 0	56 0
Bread, Baking, etc.:											
Table hands	—	—	(28 0)[12]	28 0*	29 0*	29 0*	29 0*	32 0*	72 0	60 0*	65 0*
Single hands	—	—	(33 0)	33 0	33 0	33 0	33 0	34 0	76 0	69 0	69 0
Transport:											
Dock labourers,[13] quay, or by P.L.A. . . .	*4 2*	*5 0*	*5 0*	*5 0*	*5 0*	*5 0*	*5 10*	*5 10*	*16 0*	*12 0*	*12 0*
Dock labourers: shore, or by shipowners . . .	*5 0*	*5 10*	*5 10*	*5 10*	*5 10*	*5 10*	*6 8*	*6 8*	*16 0*	*12 0*	*12 0*
Carters, "heavy singles"	—	—	25 0[16]	25 0	25 0	26 0	26 0	27 0	66 0	54 0	58 0
Postmen (at 25 years of age)[14]	(24 6)	(24 6)[15]	26 0	30 0	30 0	31 6	30 0	31 0	79 11	61 3	57 10
Policemen (after 5 years' service)	27 6	29 0	29 0	29 0	30 6	30 6	30 6	32 0	84 0[8]	80 0	80 0

[1] Assuming hours to be same as majority of crafts in the building industry. [2] Rates communicated by A.E.U.

[3] Including war bonus. [4] 40*s.* taken as representative rate.

[5] Associated with A.E.U.: others received comparable rates. [6] 54 hours at 8·5*d.* an hour.

[7] Calculated from average hours and average hourly rate.

[8] Average used for calculations: this average is also comparable with the weekly rate obtained by wheelwrights who worked for higher rates at building trade hours (L.C.C. schedules).

[9] Lower limit of range 32*s.* to 40*s.* (Trade Union Report) taken as comparable with Ministry of Labour figure.

[10] Lower limit of range 30*s.* to 40*s.* (T.U. Report). [11] 1895.

[12] Rates in 1894 were lower than in 1898, but were supplemented by allowances in kind, which were abolished in 1896.

[13] Daily rates. Rates for 1886 were calculated on 10-hour basis, although at that date hours were longer. After 1890, however, overtime rates applied after 10 hours.

[14] Highest of the various rates applying to different divisions of the London districts.

[15] Estimated on basis of a known increase in 1894 which averaged 1*s.* 6*d.* on weekly rates.

[16] Carters employed by L.C.C. were paid 2*s.* more than these rates, 1894–1914.

TABLE IV

COURSE OF AVERAGE EARNINGS FOR CERTAIN INDUSTRIES IN LONDON, 1886–1928.

(*Males only.*)

(*a*) AVERAGE EARNINGS.

Industry.	1886.	1906.	1924.	1928.
	s. d.	*s. d.*	*s. d.*	*s. d.*
Building	33 6	35 1	68 10	68 11
Engineering	30 9	32 7	57 11	61 3
Printing and bookbinding	26 11	31 10	78 6	80 4
Boots and shoes	24 7	25 10	62 3	60 11

(*b*) AVERAGE EARNINGS AS PERCENTAGE OF EARNINGS IN 1886.

Industry.	1886.	1906.	1924.	1928.
Building	100	105	205·5	206
Engineering	100	106	188	199
Printing and bookbinding	100	118	292	298
Boots and shoes	100	105	253	248

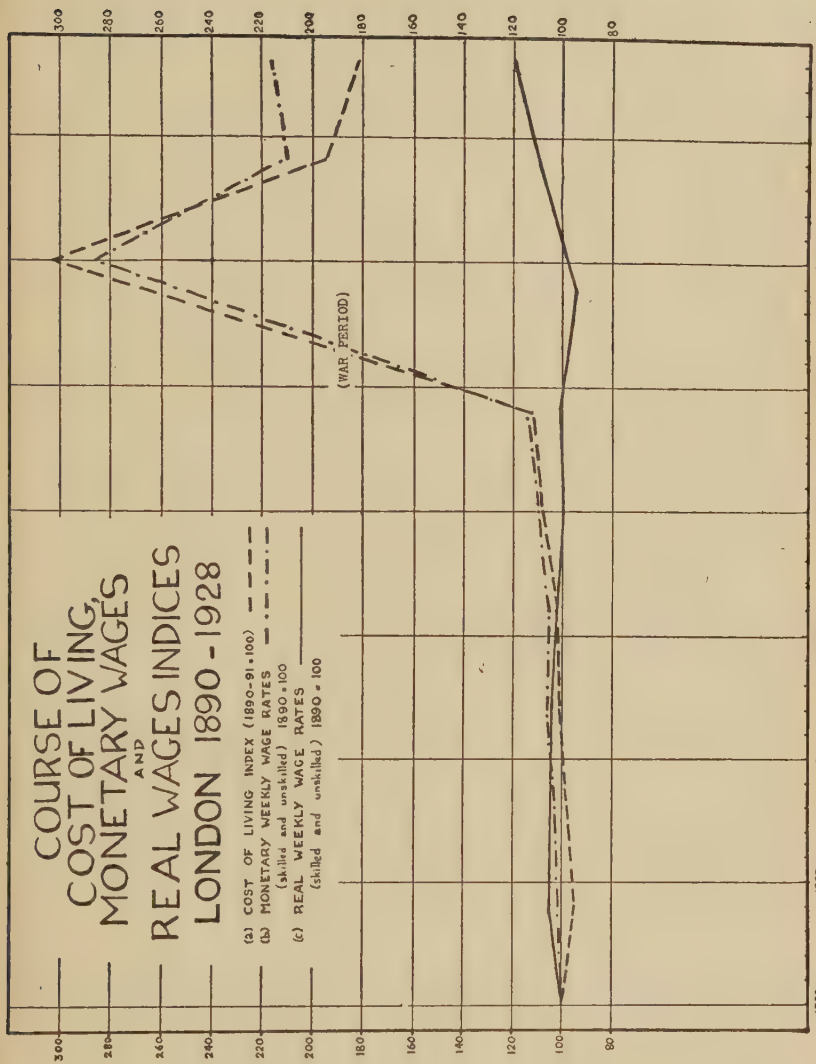
TABLE V

COURSE OF AVERAGE EARNINGS IN CERTAIN OTHER INDUSTRIES IN LONDON FOR WHICH INFORMATION RELATING TO 1886 IS NOT AVAILABLE.

(*Males only; except dressmaking.*)

Industry.	Average Earnings in			Earnings as Percentage of 1906.		
	1906.	1924.	1928.	1906.	1924.	1928.
	s. d.	*s. d.*	*s. d.*			
Cabinet making (including chairs and shop fittings, etc.)	31 6	64 5	65 7	100	205	208
Sawmilling and machine joinery	27 8	57 2	58 9	100	207	212
Bread, confectionery, etc.	28 1	59 1	60 10	100	210	217
Laundries (males)	22 3	48 10	49 11	100	219	224
Tram and bus services	31 2	79 5	81 2	100	255	260
Dressmaking, millinery, etc. (*females*)[1]	13 11	30 9	33 2	100	220	237

[1] An average earnings figure is obtainable from the 1886 Census, but is not strictly comparable. (The average for this date, based on a much smaller number of returns, is 13*s.* 6*d.*)


COURSE OF
COST OF LIVING,
MONETARY WAGES
AND
REAL WAGES INDICES
LONDON 1890-1928
(a) COST OF LIVING INDEX (1890-91=100)
(b) MONETARY WEEKLY WAGE RATES
(skilled and unskilled) 1890=100
(c) REAL WEEKLY WAGE RATES
(skilled and unskilled) 1890=100
(WAR PERIOD)
300
280
260
240
220
200
180
160
140
120
100
80
1890
1896
1901
1905
1910
1915
1920
1925
1928

CHAPTER IV: NOTES ON STATISTICS

Wage-rates.

The Ministry of Labour kindly supplied from its own records the larger part of the information relating to weekly or hourly wage-rates, and weekly hours, for London trades. But for a number of occupations figures were available only from dates varying from 1898 to 1914, and in no case was the Ministry able to give figures before 1894. The Ministry's data were therefore supplemented by information extracted from three other sources: (*a*) the early schedules of rates of pay and hours of labour recognised by the London County Council, issued by the L.C.C. in connection with the "fair wages clause" regulation for public contracts; (*b*) Charles Booth's "Life and Labour" volumes; and (*c*) the Board of Trade Reports on Trade Unions, of 1887 (C. 5104) and 1890–1 (C. 6475). The L.C.C. data begin from 1893, with the exception of a few comparative figures, including details of rates paid by the Metropolitan Board of Works in 1888.

Except when otherwise stated, where two or more rates were quoted for the same occupation, the higher was chosen, as being more representative of the Survey Area, which is, generally speaking, the central part of the area over which "London" rates apply. In some cases, also, the weekly rate was calculated from the hourly rate and the weekly hours; or conversely the hourly rate, was calculated from the weekly rate and weekly hours.

The majority of the data are rates agreed between trade unions and employers, and are therefore recognised minimum or standard rates, applicable primarily to organised workers, though in a large number of cases they govern the rates payable throughout the trade. No allowances are made for recognised additions to wages such as postmen's uniforms, policemen's boot allowances, etc.

The year 1894 was found to be the earliest from which the main series of London data could be continued. Over this period, with a few estimates, a series relating to eleven groups (35 occupations) was obtained. It was possible, however, to carry back more than half the series (relating to about 20 occupations) to 1890 and 1886. The movements indicated by the averages of these compared sufficiently well[1] with the indices based on the main data, to warrant the use of the smaller set of data for the earlier years.

From this material indices were constructed (on base 1894 = 100) for "unskilled labour" and "skilled labour." The occupations included in the indices as skilled and unskilled respectively were:

Skilled.

Bricklayers	Carpenters
Masons	Plumbers
Plasterers	Painters (higher grade)
Cabinet Makers	Fitters, Turners, Smiths, etc.

[1] Within two points (2 per cent.), 1894–1910.

French Polishers
Upholsterers
Wheelwrights
Electrical Wiremen
Ironmoulders
Farriers (Firemen)
Brassfinishers
Compositors
Bookbinders
Lithographic Printers
Police (of 5 years' experience)

Unskilled.

Builders' labourers
Engineers' labourers
Electrical Wiremen's labourers
Dock labourers (quay and ship)
Carters

A combined index was calculated on the basis of the figures for the "skilled" and "unskilled" groups weighted in the ratio 3 : 2, this being roughly the ratio between the wages of "skilled" and "unskilled" workers in the most important London industries at the middle of the period covered (1906: data from Earnings Enquiry of that year).

EARNINGS.

Earnings figures were separately distinguished for London in the published volumes of the 1906 Earnings and Hours Inquiry, and separate figures for London were specially obtained by the courtesy of the Ministry of Labour for the years 1924 and 1928. For 1886, however, London figures were not always distinguished in a uniform way. The limitations upon the number of industries which could be compared over the whole period were due mainly to the deficiencies of the 1886 census. For similar reasons it was possible only to compare earnings for males.

Although for 1906 the earnings of adults, and of lads and boys, were distinguished separately, this was not the case for the 1924 and 1928 inquiries. The series therefore of necessity relates to all male workers.

For London, only four groups in the 1886 census could be considered as having comparability with later censuses, and the results of these were combined to form a London index, on 1906 as base. The *wage-rate* index employed to compare with this was based on data selected from the collected wage-rate figures for the appropriate trades,[1] in which the occupations included were weighted roughly according to the numbers returned as following those occupations in London in the 1906 Inquiry, as in the following example:

Building—	
Bricklayers	6·0
Masons	3·0
Carpenters and joiners	12·0
Plumbers	1·5
Plasterers	2·0
Painters	1·0
Labourers	19·5
	45·0

[1] In a very few cases it has been necessary to interpolate figures.

For the purpose of obtaining a combined index of earnings for the four groups of industries, the figures for these industries were "weighted" according to their relative importance, as measured by the numbers occupied (mean of Census returns for 1911 and 1921).

For a further number of London trades comparison of earnings since 1906, but not since 1886, is possible, and these have been added in a separate Table.

An attempt was made to obtain an earnings figure relating to 1894 or thereabouts (which could be compared with the wage-rate index for that year) from information in the various Booth volumes. There appeared, however, to be so much uncertainty as to the comparability of the results that they were not brought into the series.

For 1928 the Ministry of Labour was unable to supply separate earnings figures for the London engineering trades, as these were not distinguished in the original returns. It was found, however, that wage-*rates* in engineering had, during the years 1924–8, moved in very much the same manner in London and in Great Britain as a whole, and the percentage increase in engineering earnings in the latter area between 1924 and 1928 was therefore interpolated for London.

Note on Chart (Wage-rates).

Although, owing to the exigencies of the data, the year 1894 is mostly employed as the base year in the text, the use of this year as base for a chart would be somewhat misleading in view of the fall of prices and the rise of real wages which took place prior to 1894. The year 1890 was therefore taken as base, and a table of the figures used, recalculated for this year, is appended.

Weekly Wage-rates, London, 1886–1928.

Year.	General Index.			
	Monetary Rate.		Real Rate.	
	1894 = 100.	1890 = 100.	1894 = 100.	1890 = 100.
1886 . . .	94	95	88	92
1890 . . .	99	100	95	100
1894 . . .	100	101	100	105
1898 . . .	102	103	99	104
1902 . . .	105	106	99	104
1906 . . .	105	106	98	103
1910 . . .	108	109	95	100
1914 . . .	113	114	96	101
1920 . . .	282	285	89	94
1924 . . .	208	210	103	108
1928 . . .	214	216	113	119

CHAPTER V

HOUSE RENTS AND OVERCROWDING

In any survey of life and labour the questions of housing accommodation, rent and overcrowding must necessarily occupy a very important place.

From a social and economic point of view the housing problem has several aspects. Expenditure on rent is a considerable item in the budget of a workman's family, and movements of rent have therefore an appreciable influence on cost of living. The manner in which a family is housed is an important factor in their comfort, health and well-being, and consequently has a considerable influence on what is generally termed their "standard of life." Limitations of space largely determine the possibilities of home study under tolerable conditions, and hence have a definite bearing on educational progress and self-improvement, not only for children but for adults. Lastly, overcrowded tenements cannot in many cases make proper provision for the separation of the sexes, which according to accepted civilised standards is essential to decency.

The moral, educational, and hygienic aspects of the London housing problem are so important from a national point of view, as to overshadow its purely economic side. In the present preliminary volume however it is only possible to take account of such aspects of housing as admit of some kind of continuous statistical measurement, whereby the changes which have taken place since the date of Charles Booth's Survey can be definitely traced.

Consequently the present chapter will be mainly limited to an endeavour to measure the changes which have taken place in the past forty years in the level of working-class rentals, and in the amount, proportion and local distribution of overcrowding. The rental figures apply to the County of London, but the statistics of overcrowding cover the whole of the Survey area.

Working-class Rentals

In 1904 the Board of Trade published Tables showing the average annual rental value of houses of different classes in London at quinquennial intervals from 1880–1900.[1] The tables show the movement of rental value, both inclusive and exclusive of the local rates.

Through the courtesy of the Board of Inland Revenue and of the London County Council we have been enabled to continue these Tables up to 1910, the year of the last quinquennial valuation before the war. Unfortunately from the point of view of this survey, the collection of statistics was suspended during the war, and the repeal of the Inhabited House Duty in 1924 had the incidental effect of stopping the compilation of these valuable figures for later years. Nevertheless the enactment of rent control during the war, and the permissions accorded in subsequent years to raise the rents of "controlled" houses by specified percentages, afford the means of making a fairly close estimate of the movement of working-class rents (including rates) in London in the post-war period as compared with the years immediately preceding the war.

As there is evidence that there was no appreciable movement of rents of working-class houses in London during the years immediately preceding the war, we can without great risk of error use the rent control percentages to continue the Table of average rental value, so far as concerns the houses subject to rent control, which included practically all working-class dwellings, and still applies to the great majority of such dwellings.

[1] Cd. 2337, p. 34 *et seq.*

We therefore have the material for the construction of the following Table which shows the movement of rentals, inclusive of rates, of houses below certain rental limits from 1880 to the present day, subject to certain assumptions which are referred to below.

TABLE I

AVERAGE ANNUAL RENTAL VALUE (INCLUDING RATES) OF LONDON HOUSES BELOW CERTAIN LIMITS OF VALUE

	(a) All Houses under £30.	(b) All Houses under £50.	Percentage Comparison (1890=100). (a)	(b)
	£	£		
1880	21·4	28·4	96·4	96·6
1885	22·5	29·8	101·4	101·4
1890	22·2	29·4	100·0	100·0
1895	23·6	31·5	106·3	107·2
1900	24·1	32·3	108·6	109·9
1905	25·9	34·4	117·2	117·0
1910	25·8	34·2	116·2	116·4
1920	(Controlled Rents only)		173·0	173·4
1925			169·6	169·9 [1]
1928			167·2	167·6 [1]

The post-war figures relate to the end of the years named, and are based on the assumptions that (1) all these houses are subject to rent control, (2) that the full permitted increase of rent has in all cases been charged. The effect of these qualifications is discussed later (see pp. 149–150).

The object of introducing the upper limits of annual value (£50 or £30) was of course to exclude from the comparison the bulk of middle-class houses. It is evident, from an inspection of the figures in the Tables, that it is of very little consequence for the purpose of tracing the movement, whether the pre-war line be drawn for this purpose at £30 or £50, since the movement of rentals of houses with annual value less than £30 has been almost exactly the same as that of houses less than £50. The reasons for selecting these limits

[1] The fall is accounted for by decreases in rates.

were fully stated in the Board of Trade Report of 1904, where moreover the results were checked by comparison with those of an independent census of the rentals of about 20,000 houses in 500 "typical working-class streets" in twenty London Boroughs at different dates.

The local details of this sample inquiry are so interesting that though they only cover a period ending in 1900 they are reproduced in Table II opposite. The figures given in that table show that the average rental (including rates) of the 20,000 houses was £25·37 in 1890 and £27·76 in 1900, showing a rise of 9·4 per cent. in the decade. It will be seen that both the amounts of these average rentals and the percentage rates of increase are as nearly as possible the means between the corresponding figures shown in Table I for houses below the £30 and £50 limits respectively. That this was no chance coincidence is shown by comparing the growth of rentals estimated by the two independent methods over the twenty years 1880–1900. During this period the rentals of the "sample" houses increased by 13·3 per cent., whereas the average rental value of all houses below the £30 limit increased by 12·6 per cent., and that of houses below £50 by 13·6 per cent.

The figures given in Table II enable the movements of rentals to be traced for separate Metropolitan boroughs. The result is to show that during the last twenty years of the nineteenth century working-class rents in the eastern district rose by over 25 per cent., while in the northern, southern and western areas the rise was less than half as great.

It is not possible, at all events in this preliminary volume, to carry this interesting series of figures beyond the year 1900, but their general effect is to corroborate so closely the rental statistics based on the quinquennial valuations as to afford ample justification for continuing to rely on the latter statistics for measuring the growth of working-class rentals in London, up to the outbreak of the war. No doubt the upper limits of £30 and £50

TABLE II

COURSE OF RENTS IN CERTAIN WORKING-CLASS STREETS IN LONDON, 1880—1900.[1]

Borough.	Percentage Variation in Rent (including Rates) in certain Working-class Streets. (Rents in 1900=100)				1900. (Percentage Increase as compared with 1880.)
	1880.	1885.	1890.	1895.	
Northern Districts:					
Hampstead	85·9	90·1	93·7	96·2	16·4
Islington	90·6	92·7	92·0	95·0	10·4
St. Marylebone	86·1	88·4	91·3	95·6	16·1
St. Pancras	85·7	90·0	90·9	98·6	16·7
Stoke Newington	99·2	99·3	91·7	97·2	0·8
Eastern Districts:					
Bethnal Green	78·8	84·6	88·6	94·5	26·9
Hackney	85·6	95·5	97·4	90·3	16·8
Stepney	75·0	78·0	80·1	90·1	33·3
Southern Districts:					
Battersea	90·5	92·5	92·8	94·7	10·5
Camberwell	89·9	89·8	90·9	94·8	11·4
Deptford	87·3	94·4	93·5	95·8	14·5
Lambeth	90·6	96·8	98·7	97·3	10·4
Lewisham	104·8	102·4	96·9	94·0	4·6[2]
Southwark	86·6	93·3	91·4	97·0	15·5
Woolwich	84·7	85·4	91·3	93·8	18·1
Western Districts:					
Chelsea	90·9	92·3	87·5	97·3	10·0
Fulham	88·2	80·1	83·3	92·5	13·4
Hammersmith	93·4	89·5	91·8	94·7	7·1
Paddington	88·4	89·7	90·0	98·5	13·1
Westminster	88·2	92·3	93·4	98·1	13·4
Mean for 20 Boroughs	88·5	90·8	91·4	95·3	13·0
Average rental (including rates) of houses in the selected working-class streets	£ 24·57	£ 25·21	£ 25·37	£ 26·46	£ 27·76

The figures given in the above table relate to 20,000 houses, situated in 500 streets in the Boroughs specified.

[1] From Cd. 2337, p. 48(D).

[2] Decrease.

would have needed reconsideration if the quinquennial valuations had been continued on the same basis for the post-war period, in view of the great change in the value of money. As a matter of fact however this question has not arisen, since for reasons already given this series of figures has been discontinued, and it has been necessary to estimate the post-war figures on a different basis which avoids this particular difficulty.

Reviewing therefore the general course of rentals over the entire period 1890–1928, as shown in Table I, we may conclude without any great risk of error that the average rental value, including rates, of the whole mass of houses in London which are occupied by the working-classes, and which since the war have been subject to rent control, has risen between 1900 and 1928 by rather more than one-half. As compared with 1890 (the time of Charles Booth's Survey of poverty) the increase is about two-thirds. These statements are true, whether £30 or £50 be taken as the upper limit of pre-war annual value.

It is important to note the exact meaning of this comparison. The comparison is not between houses or tenements of identical character, but between the average rental value of houses in London of the above descriptions at different dates, irrespective of changes in the quality of these buildings, either by deterioration through age and decay, or by improvement through replacement. These two tendencies are always operating in opposite directions, but while their effects may be considerable in relation to the rentals of particular districts, their net result can only be of minor importance in considering the average of London as a whole. That this is so may be inferred from the close coincidence of the results of Tables I and II, so far as concerns the movements of rentals, although Table I takes no account of changes of the kind referred to, while the method employed in Table II is to trace the rents of the same houses.

The rentals dealt with both in Table I and Table II, are the rents, including rates, of working-class houses.

As however sub-letting is a frequent practice, these rentals do not correspond in a large number of cases to the actual net weekly rents paid by London working-class families. An index of rentals however is only concerned with the *average* trend, and it is evident that in so far as sub-letting takes place between one working-class occupier and another (i.e. in the great majority of cases) its effect on the average is *nil*, any increased share of the rental borne by the sub-tenant being exactly balanced by the decreased share borne by the occupier who sub-lets. The practice of sub-letting results no doubt in greatly widening the range of which the index is the average, but it can only affect the index itself in so far as the tenement may be sub-let by a middle-class occupier, or to a middle-class tenant whose rental is outside the scope of the present inquiry. It is believed that the cases of middle-class families residing in houses of the character usually occupied by work-people and sub-letting rooms in those houses to workmen's families form so small a proportion of the whole number, that any slight increase of the index attributable to this cause would be fully offset by the cases (which are not infrequent) in which the rental charged is less than that which is legally authorised.

It may be added that in the pre-war period 1905–12, for which the Board of Trade made a special investigation of the actual weekly rents paid by working-class families in different parts of London,[1] the movement of these rents (including of course those of sub-tenants) corresponded very closely with the movement of rental values (including rates) of London houses of value below £30. Though the period covered is a short one, the results so far as they go confirm the conclusion arrived at above.

While for these reasons it is unnecessary in the index to take account of sub-letting, it is essential to note that an appreciable proportion of working-class rentals in the survey area are now de-controlled, by reason of migration or new building. In the autumn of 1929

[1] See Seventeenth Abstract of Labour Statistics, p. 114.

the Ministry of Labour made inquiries in different parts of the area included in the present survey, covering from 30,000 to 40,000 workmen's dwellings, which led them to conclude that in about 7 per cent. of these dwellings the rental was de-controlled. They found that the average rents of de-controlled dwellings, where re-let unaltered, were about 30 per cent. higher than those of controlled dwellings, which is equivalent to saying that their average rise has been about double that of the controlled dwellings since 1914. The inquiry was not confined to the central area but extended to the fringe of urban areas outside the county.

On the basis of this estimate the average rise of all workmen's rentals (controlled and de-controlled), including rates, since 1914 will be found to be 47 per cent. as compared with the average rise for controlled dwellings of 44 per cent.[1]

The effect is to raise the index number of London working-class rentals (including rates) in 1929 to 171, as compared with 100 in 1890. This, therefore, is the figure used in Chapter III for the purpose of the Index of Cost of Living.

Overcrowding

The only available statistical method of measuring the changes which have taken place in the housing accommodation for London workmen's families, during the past forty years, is to calculate and compare the proportions borne by the number of occupants to the number of rooms occupied, or (to put it in a somewhat different way) the percentages of the population, living (say) two or more to the room[2] at different periods.

[1] See Table III (p. 161). The increase of 44 per cent. is made up of 40 per cent. on rents, the maximum permitted under the Rent Restriction Acts, together with the increase in rates and water charges.

[2] This is the standard which Charles Booth himself applies, and which is used below. It will be seen that it differs from the (miscalled) "Registrar-General's Standard" which was based on "over two" instead of "two or more" to a room—a very considerable difference. There is something to be said for both methods, but for the purposes of the New Survey it is most important to preserve comparisons with the former inquiry.

These fundamental data were not compiled before the time of Charles Booth's Survey, but he was successful in persuading the Registrar-General to include in the 1891 Census forms an optional inquiry showing the number of rooms occupied by families dwelling in tenements of four rooms or less. On the basis of the returns thus obtained Charles Booth constructed tables showing the proportion of "crowded" and "overcrowded" population in each district, and he was also able to connect the conditions of crowding with conditions of occupation. In all subsequent Census inquiries the number of rooms occupied in small tenements has been asked for as part of the general inquiry form, and from 1911 onwards the information has been obtained for dwellings of all sizes. We are thus in a position to make comparisons of overcrowding in London, not only as between different districts at the same date, but also between successive Census years from 1891 to 1921, so far as concerns the smaller tenements, and between 1911 and 1921 in respect of tenements of all sizes. These comparisons necessarily assume that the units compared (viz., the occupants and the room) are fairly stable units, i.e. that there has been no such change in the average size or cubic capacity or definition of a room, or in the age and sex distribution of the London population as would be sufficient to upset comparison.

Before examining the validity of this assumption, it is necessary to turn aside and clear up a misapprehension which has arisen from the use of the term "overcrowded" in the sense indicated above. The proportion of persons to rooms occupied affords a sound statistical index of crowding, for the purpose of comparing the average conditions prevailing in large areas, or over large groups of families, or alternatively for the purpose of ascertaining the general trend of overcrowding in the same large area. But it does not, and never was intended to, afford an administrative test of overcrowding applicable to particular tenements. For such a purpose it is obviously necessary to take into account not only the aggre-

gate number of occupants but their age and sex distribution. For the space requirements of an adult may differ from that of a child, while the sex distribution may be of vital importance in determining the minimum requirements of a family in respect of bedroom accommodation. Recognition of these elementary facts has led to the construction of various standards of overcrowding (e.g. the so-called "Manchester standard" of $2\frac{1}{2}$ persons per bedroom) for use by public authorities in their housing administration. It has also led some writers to contrast these administrative standards with what they term the "Registrar-General's standard," to the disadvantage of the latter. It will however be recognised from what is said above that the two "standards" sought to be compared are not *in pari materia*. There is no "standard of overcrowding," promulgated either by Charles Booth or by the Registrar-General as applicable to the case of an individual tenement, or to administrative purposes. Their so-called "standards" are only convenient statistical indices for comparing conditions over long periods in the same area, or between different parts of that area.[1]

In connection with the Sample Inquiry now being carried out under the New Survey, the "Manchester Standard" is in fact being used, but for the purpose of long-period comparisons such as those aimed at in the present volume, the only practicable basis of an index is the proportion between occupants and rooms occupied. Moreover an index constructed on this basis is quite sufficient for the specific object in view, always provided that the basic units of the comparison have not in the meantime undergone a material change. These basic units are (1) the proportion of children to adults, and (2) the average size of a room.

(1.) As regards the former point, there has been an undoubted decrease in the percentage of children under ten years of age to the total London population during

[1] Caution is necessary in using this index to compare overcrowding in different parts of the country, owing to different standards of room space.

the period under comparison. The percentage fell from 22·7 in 1891 to 17·3 in 1921. Thus if it were assumed that, for the purposes of overcrowding, one adult is equivalent to two children under ten, it would be found that the accommodation requirements of 1,000 persons of all ages in 1921 would be about 3 per cent. higher than that of a similar number in 1891.

(2.) As regards the average size of a room in London at different periods, there are no materials for a statistical comparison, and it is necessary to rely on the general observation and experience of those who have been most closely connected with London housing problems. The results however of such inquiries as it has been possible to make lead to the conclusion that there has been no general change in the size of rooms, the majority of which are in fact the same as those occupied forty years ago. In so far as there have been local changes (e.g. owing to clearances and rebuilding, or the development of new housing areas) the tendency during the first twenty years was probably on the whole towards a slight increase in average size of rooms, while since the great increase in the cost of building began, a counter movement towards a reduction in the size of rooms in new houses has been discernible. The latter movement however can hardly have affected the Census statistics, since practically no workmen's dwellings were erected in London during the war, and most of the period of post-war housing activity is subsequent to 1921.

It may fairly be inferred that as both the basic units of comparison referred to on the previous page have changed but slightly and in the same direction their mutual relation remained practically undisturbed up to 1921.

The results of the comparison are assembled in the Tables IV and V on pp. 162–166, the basis and method of construction of which are explained in detail in the note on p. 169. The figures in these tables show that in 1891 over half the occupants of small tenements (534 per 1,000 in the County of London and

512 per 1,000 in the whole of the present Survey Area) were living two or more to a room. Thirty years later, in 1921, the corresponding proportions were 374 per 1,000 in the County of London, and 355 per 1,000 in the whole Survey Area. Though on any reasonable standard of civilised requirements the figures for 1921 must still be regarded as very unsatisfactory, they show a decrease of something between a third and a quarter in the proportion living in "overcrowded" conditions as defined above as compared with 1891.

Before however drawing definite inferences from this apparent improvement, there is an important qualification to be borne in mind. The figures apply solely to occupants of small tenements, and during the period compared, the proportion of the total population who live in small tenements has materially increased. Thus as between 1891 and 1921 the number of occupants of tenements of four rooms or less in the County of London increased from 2,333,000 to 2,914,000, a rise of 25 per cent., while the number in tenements of larger size decreased from 1,615,000 to 1,330,000, a fall of over 17 per cent. The whole of this change of distribution has taken place during the present century, for between the years 1891 and 1901, i.e. during the period covered by Charles Booth's Survey, the population of the larger tenements was increasing faster than that of the smaller. The Census of 1911 indicated that this movement had been reversed, and though a suggestion was made [1] that the apparent change was due to an alteration in the Census paper, the Census of 1921 proved conclusively that the new tendency was real and persisting, and was proceeding at an accelerated rate. No doubt the changed habits of the people with regard to living in flats have brought within the category of occupants of small tenements a considerable section of middle-class families among whom there is little or no overcrowding.

This change has certainly tended to exaggerate the apparent improvement, and it is therefore desir-

[1] *Journal of Royal Statistical Society*, March 1918, p. 218.

able to examine the figures for overcrowding of all tenements, as well as those for tenements below a certain size. Unfortunately the desired data are only available for 1911 and 1921. As between those years the proportion of the whole population of the Survey Area living two or more to a room remained almost stationary, while the proportion of the occupants of small tenements living two or more to a room fell materially. It is, therefore, evident that a comparison limited to small tenements may be misleading, and we have accordingly been led to attempt to reconstruct on an estimated basis the missing overcrowding figures for tenements of all sizes in 1891 and 1901. The basis of the estimate, which is admittedly only approximate, is described in the note on p. 169. So far as the result can be relied on it shows a fall from 301 to 241 in the proportion per 1,000 of population living in overcrowded conditions in the Survey Area as between 1891 and 1921, a fall of one-fifth.

In the County of London the fall has been from 331 to 268, but in the outer ring, where the process of urbanisation has been proceeding apace, the proportion of overcrowding, though still much lower than in the central area, appears to have actually increased. This increase, it may be noted, has taken place entirely in the present century, and most of it in the first decade of the period, there being a decline in overcrowding from 159 to 136 between 1891 and 1901, whence the figure rose to 175 in 1911, and to 185 in 1921.

An examination of the figures for the separate boroughs in the County of London shows that, in every one of them, overcrowding diminished in the decade 1891–1901, with the single exception of Stepney, which was deeply affected by the immigration of Jews from Eastern Europe.

In the decade 1901–1911 the figures reveal a very different state of things. Though for the County of London as a whole the degree of overcrowding remained practically unchanged, no less than 18 of the 29 boroughs

showed actual increases. Evidently something must have occurred in that interval to check or even to reverse the previous tendency towards improved conditions.

Some light may be thrown on this matter by an examination of the statistics showing the fluctuations of the activity of the London building trades as reflected in the movements of unemployment. The figures, though confined to carpenters and plumbers, are significant. In the years 1893–1900 the average percentage unemployed was less than 2½, and never rose to 5 per cent. in any one year. In the five following years, 1901–5, it averaged 6½, and in the next five years (1906–10), the average was over 10, while in both the years 1908 and 1909 it exceeded 12. In the following few years there were some signs of revived activity, but this was brought to an abrupt end by the outbreak of war, which practically stopped housebuilding in London except for munition purposes.

The statistics of the output of new houses in Greater London are no less significant, the total number erected having fallen from 27,381 in 1899 to 13,377 in 1909 and 8,579 in 1913.[1]

The decline in building activity began to be noticeable about the time of the controversies on taxation aroused by the 1909 Budget (eventually enacted in 1910), and the arrest of private building has frequently been ascribed to this measure. The downward movement, however, was well under way before 1909, so that the events of that year can only have contributed to aggravate the tendency. Whatever may have been the ultimate causes of the check to house-building in the decade 1901–10, there can be little doubt that this arrest was largely responsible for the turn in the tide in respect of London overcrowding which was revealed by the 1911 Census. A highly significant symptom of the

[1] *Journal of Royal Statistical Society*, March 1918, p. 216. The figures are compiled by the Commissioner of Metropolitan Police and exclude the City of London, but this exclusion is immaterial (see *ibid.*, p. 163).

change was the sharp fall in the percentage of unoccupied tenements between the year 1910 and the outbreak of war. The statistics compiled by the Metropolitan Water Board for the whole of its area showed a fall in the proportion of revenue lost owing to empty houses from 6·6 per cent. in 1909 to 3·9 per cent. in 1913.[1] The decline in the proportion of unoccupied tenements in the London County Council's dwellings was even more striking, the percentage of rental lost through this cause sinking from 7·5 per cent. in 1910 to 1·8 per cent. in 1914.

The decade between the Census years 1911 and 1921 was highly abnormal, since it included the whole of the war period, and the beginnings of the State and municipal housing schemes which followed the war. The fact that during this period the index of overcrowding in the County of London still showed a fall (from 285 per thousand to 268), must be largely ascribed to the fact that by this time the population within the county area had ceased to grow. Across the county border, where the main increases of population were now taking place, there was a rise of the index of overcrowding from 175 to 185 between 1911 and 1921.

It is not to be wondered at that the chief centres of overcrowding have throughout the whole period been the congested areas near the centre. In 1891 the unenviable pre-eminence in overcrowding lay with Holborn, Finsbury, Shoreditch and Bethnal Green, in all of which the proportion per thousand was over 500, and these were followed by Stepney, Southwark, St. Marylebone and St. Pancras with proportions of between 400 and 500. In 1921 the same boroughs head the list (save that Bermondsey has replaced St. Marylebone), but Holborn has moved from first to eighth place. All these congested areas show decreases of overcrowding of varying amounts, and only the borough of Finsbury continues to show a proportion above 500. Of the out-

[1] See Report of Mr. J. C. Spensley's paper on "Urban Housing Problems," *Journal R.S.S.*, March 1918, p. 210; also pp. 169 and 170.

side areas West Ham shows much the greatest increase of overcrowding (from 196 to 292), which is no doubt accounted for by its rapid urbanisation, especially during the decade 1901–11 when the index rose from 193 to 258.

It is of interest to divide the Survey Area into three rings: inner, middle and outer, and to compare the degree of overcrowding in these three rings.[1] This comparison is made in the Table below. The outer ring consists of the areas outside the County of London, the inner ring includes the central areas of London, and the middle ring (much the largest of the three) is intermediate between the other two. The results may be summarised as follows:

	Population in (000's).		Percentage of Population living two or more to a Room.			
	1891.	1921.	1891.	1901.	1911.	1921.
Inner ring .	1,582	1,367	44·0	39·2	39·3	35·5
Middle ring .	2,645	3,114	27·5	23·1	23·5	23·0
Outer ring [2] .	583	1,225	15·9	13·6	17·5	18·5

These figures show that throughout the period overcrowding has been very much worse in the centre than in the other parts of London, while the least overcrowded part of the Survey Area has lain outside the County boundary. The figures of the Table also show that the central area, where overcrowding is worst, has considerably declined in population (from 1,582,000 in 1891 to 1,367,000 in 1921), while the outer ring, where overcrowding is least, has more than doubled its number of inhabitants in the same period. No doubt in the central area the constant pressure of the demand for space for business premises has exercised an evil effect on overcrowding, especially in the case of those classes of workpeople who cannot live at a distance from their work.

The percentage of overcrowded tenements is considerably lower than the percentage of the population living in such tenements. To test the matter statistically it is necessary to use the Registrar General's standard

[1] See notes, p. 170. [2] Including Penge.

of "more than two" in place of Charles Booth's standard of "two or more" to a room, and the comparison can only be made for tenements of less than five rooms. On this basis it is found that the percentage of "overcrowded" small tenements in 1891 was 23·1, while that of the population of such tenements was 35·8. In 1921 these percentages had fallen to 13·8 and 19·3 respectively.[1]

The conclusion to be drawn from a study of all these statistics, is that while housing conditions in London, as measured by the degree of overcrowding, were not quite so bad in the year 1921 as at the time of the Booth Survey, the rate of improvement had been far from satisfactory, and that such upward movement as was in progress in the earlier years had very appreciably slowed down since the arrest of building activity in the early years of the present century, followed and aggravated by the almost total suspension of house-building during the war. In the outskirts of London, where housing conditions are still much less congested than near the centre, the evils of overcrowding actually increased in the decade 1911–21.

From the acute shortage of housing accommodation which resulted both in the London area and elsewhere, we are only gradually recovering by the aid of great and costly public efforts. A detailed account of the housing legislation and administration of successive post-war governments belongs to national rather than to local history, but the following figures with regard to post-war house building in London and the surrounding area illustrate the extent to which private building has given place to public or publicly subsidised enterprise.

In the years before the war private enterprise provided the vast majority of the houses built. Since the war the total number of houses built in Greater London up to the end of 1928 was about 201,000, of which 73,500 were erected by public authorities and housing trusts, and 29,000 by subsidised private enterprise. Only 98,000, or less than half the total, were built by un-

[1] See Table on p. 168.

assisted private effort, and these must have included a large proportion of houses not intended for workmen.

Even more significant are the figures for the County of London, where during the years 1920–28 only 39,600 new houses were erected, of which only 13,300 were built by unsubsidised private enterprise. In addition the London County Council erected nearly 23,000 houses and flats for the benefit of London workmen's families, but situated outside the County area, at Becontree, Hendon and elsewhere.[1]

The above are gross additions to the house accommodation of London, but to arrive at the *net* addition we have to make a deduction for houses demolished, either as uninhabitable or to make room for business premises. In the post-war period 1920–28 the total number of houses that thus disappeared was 6,600 in London proper and about 8,400 in Greater London.

A careful estimate by the London County Council indicates that during the seven years ending 1928 the *net* provision of additional houses in Greater London was sufficient to accommodate about 810,000 persons, i.e. more than double the estimated growth of population during that period. This shows clearly that a considerable impression has been made on the housing shortage, so far at least as concerns the total accommodation provided. Less progress, however, has been made towards the solution of some of the other difficulties of housing, e.g., the reconditioning or clearance of "slum" dwellings, and the problem of ensuring that the dwellings provided shall be adapted to the means of the classes who most urgently need them. It is to be hoped that the present survey may throw new light on some of these problems.

[1] These houses are included in the total given above of houses erected in Greater London.

CHAPTER V: TABLES

TABLE III.—CONTROLLED WORKING-CLASS RENTS IN LONDON

Average Percentage Increases permitted in Rents (including Rates and Water Charges) subject to the control of the Rent Restriction Acts, 1919–29.

Year.	1st June.	1st December.
1919	4	7
1920	17	49
1921	50	55
1922	53	48
1923	46	45
1924	45	45
1925	45	46
1926	48	48
1927	48	47
1928	46	44
1929	45	44

Note.—The above figures were supplied by the Ministry of Labour, and the area to which they refer is similar to that covered by the London area of the Cost of Living Enquiry of 1912 (Cd. 6955).

The permitted increases have been charged in most cases in recent years (i.e. since about 1923), when it became evident that rent-control would continue for a long time. In earlier years there were more exceptions.

TABLE IV.—HOUSING IN LONDON

PERSONS LIVING IN DWELLINGS OF LESS THAN FIVE ROOMS AND IN DWELLINGS OF ALL SIZES IN EACH BOROUGH WITHIN THE SURVEY AREA, 1891, 1901, 1911 AND 1921.

Borough.	Persons Living in Dwellings of less than Five Rooms.				Persons Living in Dwellings of all Sizes.			
	1891.	1901.	1911.	1921.	1891.[1]	1901.[1]	1911.	1921.
(*a*) *County of London:*								
City	18,662	10,625	8,999	7,558	27,740	19,500	13,408	10,509
Battersea	81,876	88,999	104,256	113,470	147,200	165,230	164,253	164,170
Bermondsey	91,668	86,156	88,307	92,568	132,100	126,300	122,257	116,819
Bethnal Green	98,247	98,853	101,505	97,407	125,230	125,800	124,062	114,203
Camberwell	102,363	117,648	142,970	170,952	228,300	251,700	252,791	259,591
Chelsea	54,285	37,723	33,239	35,833	86,150	66,090	59,077	57,305
Deptford	— [2]	51,861	60,729	72,689	— [2]	108,400	107,775	110,207
Finsbury	85,707	78,346	72,318	65,964	107,930	98,880	85,208	74,478
Fulham	51,264	81,364	100,026	110,994	89,620	134,220	149,702	154,514
Greenwich	77,424	41,260	49,263	59,514	172,770	89,710	89,811	94,249
Hackney	96,466	104,876	123,885	144,907	222,440	212,600	214,454	216,452
Hammersmith	19,956	24,211	27,068	35,694	63,200	75,790	78,469	80,050
Hampstead	44,780	55,259	66,199	83,109	91,300	105,220	114,183	122,184
Holborn	49,055	35,724	29,365	25,179	52,150	43,650	37,981	30,253
Islington	180,330	196,423	216,030	251,977	308,400	323,800	313,527	321,042
Kensington	70,718	73,425	76,025	91,487	150,340	159,670	156,353	158,399
Lambeth	143,724	153,184	167,061	192,853	263,300	288,900	285,239	289,295
Lewisham	17,492	28,928	48,458	66,915	86,070	123,800	155,241	170,218
Paddington	58,098	73,232	77,090	90,509	107,000	130,700	129,041	131,351
Poplar	104,359	105,497	113,154	121,800	160,410	162,420	156,317	156,339
St. Marylebone	85,213	74,153	64,342	60,945	123,540	115,680	102,350	90,495

St. Pancras	155,701	155,790	150,274	159,582	216,100	216,900	200,735	195,345
Shoreditch	95,229	89,580	88,444	89,068	119,820	114,640	106,907	101,494
Southwark	146,193	147,923	142,820	149,924	192,630	196,200	181,209	176,971
Stepney	195,764	209,200	201,126	189,852	269,500	281,600	263,980	237,964
Stoke Newington	— [2]	18,611	23,467	30,474	— [2]	49,800	49,703	50,991
Wandsworth	48,109	76,329	124,991	156,264	152,400	222,100	297,893	314,468
Westminster	104,797	83,624	74,617	70,432	159,400	146,290	128,818	112,526
Woolwich	55,316	50,985	51,906	75,937	92,360	109,300	112,379	131,956
County of London Total	*2,332,796*	*2,449,789*	*2,627,934*	*2,913,857*	*3,947,400*	*4,264,860*	*4,253,123*	*4,243,838*
(*b*) *Outer Districts:*								
Acton	7,536	15,810	26,894	32,946	23,900	37,320	56,977	60,490
Barking	5,286	4,807	12,510[3]	20,366	14,200	21,380	31,070[3]	35,274
East Ham	8,453	25,637	49,783	67,865	32,270	94,750	131,614	141,577
Hornsey	6,724	13,734	24,069	34,441	45,020	70,940	83,261	86,273
Leyton	15,677	24,502	46,943	60,764	60,720	95,230	119,394	124,414
Penge	3,668	5,475	8,340[3]	11,241	20,370	21,450	21,320[3]	25,099
Tottenham	21,581	35,176	67,203	83,178	70,410	101,200	135,551	144,908
Walthamstow	12,495	28,273	47,771	56,508	46,010	94,430	123,413	128,627
West Ham	96,937	130,121	177,428	205,022	202,200	263,700	284,940	297,049
Willesden	29,891	58,206	92,517	109,289	60,400	113,200	152,111	163,293
Total Outer Districts	*208,248*	*341,741*	*553,458*	*681,620*	*575,500*	*913,600*	*1,139,651*	*1,207,004*
Total Survey Area [4]	2,541,044	2,791,530	3,181,392	3,595,477	4,522,900	5,178,490	5,392,774	5,450,842

[1] Interpolated on assumption that proportion which "private family population" bore to "total population" in 1901 and 1891 was the mean of these ratios for 1911 and 1921.

[2] The 1891 figures for Deptford and Stoke Newington are included in those for Greenwich and Hackney respectively, the latter areas at this date being Sanitary Districts and not Municipal Boroughs.

[3] Estimated.

[4] Including Penge.

TABLE V.—OVERCROWDING IN LONDON

PERSONS LIVING TWO OR MORE TO A ROOM IN EACH BOROUGH WITHIN THE SURVEY AREA IN 1891, 1901, 1911 AND 1921, WITH SEPARATE FIGURES FOR DWELLINGS OF LESS THAN FIVE ROOMS.

A. *Numbers of Persons.*

London Boroughs.	1891.		1901.		1911		1921	
	Small Dwellings.	All Sizes.[1]	Small Dwellings.	All Sizes.[1]	Small Dwellings.	All Sizes.	Small Dwellings.	All Sizes.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
City of London	10,138	10,870	4,543	4,990	2,771	2,970	1,570	1,675
Battersea	35,276	38,330	31,441	34,250	35,427	37,832	34,042	36,138
Bermondsey	47,163	49,700	41,852	44,320	42,824	46,237	41,383	43,199
Bethnal Green	61,849	65,610	57,540	60,770	58,405	61,438	48,413	50,116
Camberwell	42,558	47,460	43,076	47,820	53,083	57,372	54,004	58,037
Chelsea	27,642	28,430	17,809	18,370	14,354	14,842	13,138	13,537
Deptford	—	—	17,829	19,730	20,817	22,823	23,221	24,622
Finsbury	60,770	64,570	51,247	54,070	47,150	48,237	37,073	37,743
Fulham	22,122	23,580	27,022	27,780	34,801	36,638	33,132	34,420
Greenwich	30,706	37,020	14,145	15,620	17,162	18,620	20,117	21,371
Hackney	40,613	44,930	38,810	42,920	42,562	45,962	42,631	45,573
Hammersmith	20,855	22,800	22,454	24,100	25,412	27,096	27,907	29,288
Hampstead	10,560	10,870	8,915	9,250	9,207	9,570	9,581	9,798
Holborn	33,650	34,170	21,470	21,860	15,003	15,284	10,426	10,557
Islington	96,652	102,100	92,970	97,780	97,972	102,059	101,746	104,799
Kensington	41,519	42,840	39,953	41,300	39,202	40,201	39,423	40,385
Lambeth	69,438	74,530	63,276	68,480	61,116	65,512	61,241	64,610
Lewisham	5,308	7,570	6,578	7,920	10,358	12,098	14,139	15,769

Paddington	27,866	30,710	31,639	32,550	32,302	33,191	32,701	33,288
Poplar	48,622	52,610	45,716	50,670	49,058	53,284	50,255	53,409
St. Marylebone	55,128	55,720	42,937	43,250	33,273	33,714	25,981	26,263
St. Pancras	94,108	96,180	86,295	88,070	77,176	79,012	70,784	72,006
Shoreditch	60,559	63,640	53,615	56,860	55,087	57,253	48,301	49,831
Southwark	83,364	87,650	75,277	79,480	72,127	75,808	66,480	68,560
Stepney	123,811	132,200	136,037	142,200	124,446	131,231	99,695	103,630
Stoke Newington	—	—	5,203	5,780	7,104	7,658	7,642	8,092
Wandsworth	15,580	18,130	19,963	22,650	31,117	35,129	35,440	38,808
Westminster	59,082	60,890	39,416	40,820	28,875	29,712	21,016	21,604
Woolwich	20,625	23,470	15,229	17,460	12,226	14,470	17,761	19,353
Total Administrative County	*1,246,476*	*1,326,580*	*1,152,257*	*1,221,120*	*1,150,417*	*1,215,253*	*1,089,243*	*1,136,481*
Acton	3,021	3,370	5,964	6,530	9,264	10,152	10,347	11,073
Barking	1,632	2,190	1,566	1,840	3,800[1]	4,754	5,741	6,902
East Ham	2,582	3,320	5,266	7,010	12,312	16,250	17,402	20,429
Hornsey	2,200	2,450	2,858	3,330	4,693	5,092	5,714	6,283
Leyton	4,139	5,100	5,200	6,280	10,819	12,999	13,887	15,584
Penge	1,157	1,510	1,270	1,500	1,970[1]	2,047	2,740	3,096
Tottenham	7,893	12,180	10,489	17,600	20,133	24,122	22,786	25,943
Walthamstow	3,372	4,780	6,415	10,530	11,966	16,602	14,253	17,797
West Ham	34,488	40,010	44,678	51,670	66,010	73,462	74,886	80,771
Willesden	15,583	16,610	21,464	18,430	32,201	33,705,	34,237	35,581
Total Outer Districts	*76,067*	*91,520*	*105,170*	*124,720*	*173,168*	*199,185*	*201,993*	*223,459*
Total Survey Area[2]	1,322,543	1,418,100	1,257,427	1,345,840	1,323,585	1,414,438	1,291,236	1,359,940

[1] Estimated. [2] Including Penge.

TABLE V.—OVERCROWDING IN LONDON (*continued*).

PERSONS LIVING TWO OR MORE TO A ROOM IN EACH BOROUGH WITHIN THE SURVEY AREA IN 1891, 1901, 1911 AND 1921, WITH SEPARATE FIGURES FOR DWELLINGS OF LESS THAN FIVE ROOMS.

B. *Percentages of the Total Population.*

London Boroughs.	1891.		1901.		1911.		1921.	
	Small Dwellings.	All Sizes.[1]	Small Dwellings.	All Sizes.[1]	Small Dwellings.	All Sizes.	Small Dwellings.	All Sizes.
City of London	54·4	39·2	42·8	25·6	30·8	22·1	20·8	16·0
Battersea	43·1	26·0	35·3	20·7	34·0	23·0	30·0	22·0
Bermondsey	51·4	37·6	48·6	35·1	48·4	37·7	44·7	37·0
Bethnal Green	63·0	52·3	58·2	48·3	57·5	49·4	49·7	43·8
Camberwell	41·6	20·8	36·6	19·0	37·1	22·7	31·6	22·4
Chelsea	51·0	33·0	47·2	27·8	43·1	25·0	36·7	23·6
Deptford	39·7	19·2	34·4	18·2	34·4	21·2	31·9	22·3
Finsbury	70·9	59·8	65·4	54·7	65·2	56·6	56·2	50·6
Fulham	43·2	26·3	33·2	20·7	34·8	24·4	29·8	22·2
Greenwich	39·7	24·4	34·3	17·4	34·9	20·7	33·8	22·7
Hackney	43·5	20·7	37·0	20·2	34·4	21·4	29·5	21·4
Hammersmith	46·4	24·7	40·6	22·9	38·4	23·7	33·6	24·0
Hampstead	52·9	17·2	36·9	12·2	33·9	12·2	26·8	12·2
Holborn	68·6	65·5	60·1	49·2	51·1	40·3	41·4	34·7
Islington	53·6	33·1	47·3	30·2	45·3	32·6	39·4	32·6
Kensington	58·7	28·5	54·4	25·7	51·5	25·7	43·0	25·5
Lambeth	48·3	28·3	41·3	23·7	36·6	23·0	31·8	22·4
Lewisham	30·3	8·8	23·4	6·4	21·3	7·8	21·2	9·3

Paddington	51·4	28·7	43·2	24·9	41·9	25·7	36·2	25·3
Poplar	45·6	32·8	43·4	31·2	43·3	34·0	41·2	34·1
St. Marylebone	64·7	45·1	57·9	37·4	51·7	32·9	42·6	29·1
St. Pancras	60·5	44·5	55·2	40·6	51·4	39·3	44·3	36·9
Shoreditch	63·6	53·1	59·9	49·6	62·3	53·5	54·2	49·0
Southwark	57·0	45·5	50·9	40·5	50·5	41·8	44·3	38·7
Stepney	63·2	48·4	65·0	50·5	61·9	49·7	52·5	43·5
Stoke Newington	32·8	17·1	27·9	11·6	30·3	15·4	25·0	15·9
Wandsworth	32·4	11·9	26·1	10·2	24·9	11·8	22·8	12·3
Westminster	56·4	38·2	47·2	27·9	38·7	23·1	29·8	19·2
Woolwich	37·3	25·4	29·8	16·0	23·5	12·9	23·3	14·6
Total Administrative County	53·4	33·1	47·0	28·6	43·8	28·5	37·4	26·8
Acton	40·1	14·1	37·7	17·5	34·6	17·8	31·4	18·4
Barking	30·9	15·4	32·6	11·1	30·4	15·3 [1]	28·2	19·5
East Ham	30·5	10·6	20·5	7·4	24·7	12·3	25·6	14·4
Hornsey	32·7	5·6	20·7	4·7	19·4	6·0	16·5	7·3
Leyton	26·4	8·4	21·2	6·6	23·1	10·9	22·9	12·6
Penge	31·6	7·4	23·2	7·0	23·7	9·6 [1]	24·3	12·3
Tottenham	36·6	14·3	29·8	17·4	29·9	17·8	27·4	17·9
Walthamstow	27·0	10·4	22·7	11·2	25·1	13·5	25·2	13·8
West Ham	35·6	19·6	34·3	19·3	37·2	25·8	36·5	29·2
Willesden	52·1	27·5	36·8	16·3	34·9	22·2	31·4	21·5
Total Outer Districts	36·5	15·9	30·8	13·6	31·2	17·5	29·6	18·5
Total Survey Area [2]	52·0	30·1	45·0	24·5	41·6	25·5	35·9	24·1

[1] Interpolated. [2] Including Penge.

TABLE VI.—TENEMENTS OF LESS THAN FIVE ROOMS, 1891–1921

Summary Table for the County of London showing for certain dates (1891–1921) (1) the total number of tenements of less than five rooms and of their occupants, (2) the number and percentage of such tenements with more than two occupants per room, and (3) the number and percentage of the occupants of such tenements living *more than two to a room*.

	1891.	1901.	1911.	1921.
Total number of tenements with *less than 5 rooms* .	630,569	672,030	718,365	849,396
Number of such tenements with *more than 2 occupants per room*	145,513	125,873	118,888	111,728
Total Population living in tenements with *less than 5 rooms*	2,322,972	2,430,911	2,672,933	2,913,857
Population (all ages) living in such tenements *more than 2 to a room*	831,765	727,108	726,350	563,702
Percentage of Private Families in such tenements living *more than 2 to a room*	23·1	18·7	16·6	13·8
Percentage of Population in above families living *more than 2 to a room* . . .	35·8	29·9	27·6	19·3

NOTE.—The object of this Table is solely to illustrate the distinction made on page 158 between the proportion of overcrowded tenements and the proportion of persons living in such tenements under overcrowded conditions. It has been necessary to base the table on the Census figures for persons living in small tenements, *more than two to a room* (i.e. on the Registrar General's classification), and the results are therefore not comparable with those of the preceding table, which are based on Charles Booth's standard of overcrowding (i.e. *two or more persons per room*), and which relate to occupants both of small tenements and of tenements of all sizes.

CHAPTER V: NOTES ON STATISTICS

Census Material.

Statistics of overcrowding have been collected in various forms since the 1891 census. The published figures cannot be directly compared without qualification, because of two difficulties:

(1) The figures for 1891 and 1901 exclude all that part of the population living in dwellings of five rooms and upwards.

(2) The censuses prior to 1911 did not record separately the population living otherwise than in private families. This, however, is comparatively a minor source of error.

(1) There are, in one sense, comparable figures for the four dates, for it is possible to obtain for 1911 and 1921 the rate of overcrowding in dwellings of less than five rooms, to compare with the earlier years. But it is not advisable to use this directly as an index of the rate of overcrowding because the proportion of the population living in large tenements has been falling rapidly since 1901. For the County of London area, the percentage of the population living in large tenements, which stood at 41·3 per cent. in 1891 and 42·8 per cent. in 1901, fell to 38·2 per cent. in 1911 and 31·4 per cent. in 1921.

After various hypotheses had been tried which failed to give satisfactory results, it was found that in 1911 and 1921 the percentage of overcrowding in large tenements bore a fairly constant ratio to the percentage of overcrowding in all tenements. For the County of London they stood in the ratio of 0·140 to 1 in 1911 and 0·134 to 1 in 1921. The actual figures for individual boroughs of course vary widely among themselves, but in no case has there been any large change between 1911 and 1921, and there is no evidence of general trend of this ratio in any one direction. Moreover, as the absolute rate of overcrowding in large tenements is small, and the estimated figure for their rate of overcrowding has only to be applied to about a third of the population, it was thought that discrepancies of the order observed did not invalidate the method. Accordingly, the mean of the two data for 1911 and 1921 for each borough has been used to calculate the overcrowding for 1891 and 1901.

In view of the above, the basis of the interpolation formula actually used was that in each borough the *percentage* of overcrowding in large tenements bore a constant ratio to the percentage of overcrowding in all tenements. An alternative basis—that the percentage of overcrowding in large tenements bore a constant ratio to the percentage of overcrowding in small tenements—was found to give results which did not diverge greatly from those obtained on the former basis.

(2) For 1891 and 1901 we have no figures for the population living in large tenements. We cannot directly subtract the population living in small tenements from the total population, as the latter (for these years) contains also the population living in institutions, or otherwise than in private families, e.g. in hotels or boarding-houses.

The proportion of the population living in private families was calculated

for each borough for 1911 and 1921, and though the percentages were found to vary widely as between boroughs, they were found with very few exceptions to be fairly steady as between 1911 and 1921. For the County as a whole the percentage stood at 94·2 in 1911 and 94·6 in 1921.

As the figures in general disclosed no marked trend in either direction, in each borough the mean of the percentage for 1911 and 1921 has been assumed in each case for the years 1891 and 1901. The possible error thus introduced into the result is not of appreciable importance.

INNER, MIDDLE, AND OUTER RINGS.

The three Rings into which the Survey Area has been divided (see p. 158) are compiled by boroughs, as follows. The Inner and Middle Rings together constitute the County of London area.

Inner.	Middle.		Outer.
City	Camberwell	Lambeth (southern half)	Acton
Battersea	Chelsea	Lewisham	Barking
Bermondsey	Deptford	Paddington	East Ham
Bethnal Green	Fulham	Poplar	Hornsey
Finsbury	Greenwich	St. Marylebone	Leyton
Holborn	Hackney	St. Pancras	Penge
Lambeth (northern half)	Hammersmith	Stoke Newington	Tottenham
Shoreditch	Hampstead	Wandsworth	Walthamstow
Southwark	Islington	Woolwich	West Ham
Stepney	Kensington		Willesden
Westminster			

CHAPTER VI

TRAVEL AND MOBILITY

No change in the last generation has had more far-reaching effects upon the life of the whole community in London than the improvement of transport facilities. It has influenced almost every Londoner, both in his work and in his play. It has extended the urbanised area, increased the mobility of labour, offered a partial solution of the problems of housing and overcrowding, assisted in standardising wages and prices, and increased opportunities for culture, recreation and amusement, and even crime. Its effects are, in fact, implicit in most of the subjects discussed in this volume.

It is the purpose of this chapter to discuss the order and detail of these improvements. The physical extensions of the three main types of transport, train, tram, omnibus, will first be described; attention will then be given in turn to the frequency and extent of the various services, improvements in comfort and facilities offered to passengers, fare levels, and the effects of competition. Finally, the resulting growth of travel and its nature will be considered, and a brief résumé given of the effect of this on the economic and social life of London and its suburbs.

I. Physical Extensions: Railways

(1) *Main Line Railways.* There were in 1900 ten main line railway companies having their termini in London. The position of these termini deserves special attention from the point of view of suburban passenger traffic, for instead of being located close to the centres

of business and administration, they were, particularly in the north and west, situated upon an outer fringe. Even in the south, the positions of Victoria, Waterloo and London Bridge were by no means as central as might have been the case had the requirements of the city worker been the sole object of consideration. The historical explanation of this position is not difficult to trace. In the first place, when the main line railways were constructed, it was in the carriage of the long distance passenger and freight traffic that the hopes of the company promoters lay; and in the construction of their stations and railway lines no allowance was made for the development of suburban passenger traffic, either in the matter of lay-out or of the acquisition of adjoining land against future traffic requirements. The desirability of a single and central station had indeed been contemplated, but a Royal Commission, appointed in 1846 to consider the matter, decided that unless some general scheme for the whole of London was adopted, the railway companies should not be permitted to penetrate the central parts of London, a decision not without its advantages from the town-planning point of view. The linking up of the railway termini north of the river situate outside the most crowded area, was approved as a satisfactory alternative and this was eventually effected by the completion of the Inner Circle in 1884.

The Great Eastern, South Eastern, and Chatham and Dover Railways bore the most important share of the city suburban traffic, and in view of the facts already mentioned it is not hard to see why these lines should have developed more extensive suburban services than the other companies. The worker in the city sought for a train service without change; Liverpool Street, Holborn Viaduct, London Bridge, Fenchurch Street and Cannon Street were the main line stations nearest to his office door; and he therefore naturally turned to the suburbs served by them for housing accommodation and the desired fresh air. By means of through trains to the Midland and Great Northern Railways from Moor-

gate Street on the Metropolitan he was enabled to reach suburban stations on these lines, and by a less frequent service of trains, he could travel via Bishop's Road (Paddington) to Southall and the Great Western Line. Prior to electrification, however, passage over the Metropolitan tunnel section lines could hardly be regarded as an attractive means of travelling.

Waterloo also was in a favoured position in this respect, being early connected with the city by tube line to the Bank Station, and this undoubtedly stimulated the growth of suburban traffic to Richmond, Teddington, Wimbledon, Surbiton, Hampton Court, and other Thames Valley stations, such as Weybridge.

By 1900 then convenient railway facilities had led to a great suburban development to the east, south and south-west. To the north and west, however, there was room for expansion, provided that the comparative inaccessibility of the termini could be overcome, and more track laid down. This was achieved when the arrival of the electric motor eliminated the smoke difficulty from travel by underground railway. It is the development of underground railways, and the electrification of surface tracks on certain lines, which constitute the main features of the story of the London railways in the past thirty years. Once the Tube railways had made possible penetration into the most central parts of London, radial extension outwards from the centre was certain, chiefly to the north and west, but also in other directions, in competition as well as in co-operation with the main line railways. For this there were three main reasons. In contrast with the surface lines, they could offer a service to the very centres of business. Secondly, they could provide a frequency greater than that possible for the steam-driven train with its slower acceleration and already congested railway stations. Thirdly, operating economies per train mile could be realised, as additional through services were provided over extended sections of line.

Thus the fact is explained that whereas there have

been uninterrupted extensions of the underground railways since the beginning of the century, the main line track mileage in Greater London has actually been reduced. As may be seen in the Table on p. 194 the net reduction has amounted to some 34 miles, but the gross reduction has in fact considerably exceeded this, because there have been certain extensions.[1]

The lines closed to passenger traffic (but not necessarily dismantled) belonged mainly to the present L.N.E. and Southern Railways, where tram and bus, by reason of their greater accessibility, were offered the greatest scope for the displacement of trains in short distance transport. In addition, a large number of stations were closed in the inner districts, thus still further reducing the likelihood of increased travel upon the main line railways.

(2) *Underground Railways.* There were in 1900, in addition to the main line systems already mentioned, five local railways serving London, of which the Metropolitan and Metropolitan District were outstanding in importance. They served localities similar to those they serve to-day and had jointly provided the "Inner Circle" service since 1884. Owning and operating the southern half of the "Inner Circle," the Metropolitan District made connection with the Metropolitan at South Kensington. It also owned the railway line to Wimbledon as far as Putney Bridge, the remainder of this line belonging to the London and South Western Railway. Further west, this railway extended as now, as far as Richmond (utilising South Western lines), Hounslow West, and Ealing.

The Metropolitan Railway consisted mainly of the

[1] The chief of these, a section of 28 miles from Neasden to Grendon Underwood, was opened quite as much with a view to improving the Great Central's main line communications with the provinces, as by way of catering for suburban traffic. Other smaller sections of line were constructed between 1900 and 1913 by the G.W.R. between Acton and Northolt Junction, and by the L.N.W.R. (now L.M.S.) between Willesden and Harrow, while in January, 1930, a new service was opened by the Southern Railway between Wimbledon and Sutton.

northern half of the "Inner Circle" together with the important line from Baker Street to Aylesbury and Verney Junction. This line gave direct communication without change, from the north-west of London to the City, and was responsible for the early development of middle-class residential areas at such places as Harrow, Rickmansworth and their environs.

Important feeder lines for the "Inner Circle" were the East London, terminating at New Cross (Southern Railway) and the Hammersmith and City, jointly owned by the Metropolitan and Great Western Railways, which branched off the "Circle" at Edgware Road and terminated at Hammersmith and Addison Road. All three lines were originally equipped with steam traction. In 1900 the widespread adoption of electric traction was imminent. In that year the Metropolitan District had received tenders for electrification, while a train driven by electricity was given a trial trip between Earl's Court and Kensington.

By the end of 1900 there were two underground electric railways, the forerunners of many other similar developments. There was the City and South London Railway opened in December, 1890, with a route mileage of 3·15, and running under the river between Stockwell and the Monument. Secondly, there was the Central London Railway with a route mileage of 5·9, which had been opened for traffic on the 30th July, 1900, between the Bank and Shepherd's Bush. The construction of these underground electric lines marked the first important penetration of the most central areas of London which had hitherto, for reasons already referred to, been relatively starved of railway services.

The three later Tube railways, now known as the London Electric Railway, comprised what are generally called the "Bakerloo," "Piccadilly," and "Hampstead and Highgate" Railways. Of these the first two were opened in 1906 and the last in 1907.

Important additions (which may be studied in detail on the accompanying map) have been made to the original

lines of all the Tube Railways except the Piccadilly Line,[1] outstanding among these extensions being that between Clapham Common and Morden, opened in 1926, which not only brought railway facilities to districts hitherto entirely without them, but which incidentally gave to London the distinction of possessing one of the longest tunnel sections in the world.

All the above-mentioned electric railways to-day form part of one organisation—the Underground Electric Railways Company of London, Limited—which came into being in 1902 to electrify the then steam-operated Metropolitan District Railway. It gained control of the City and South London Railway in 1912, of the Central London in 1913, and from the first has controlled the London Electric Railway.

Indeed, apart from the Waterloo and City Tube of the Southern Railway, the only sections of local electric railway not controlled by this group are those owned by the Metropolitan Railway, comprising the suburban lines to Uxbridge, Harrow and Rickmansworth, the northern half of the Inner Circle (from Aldgate to South Kensington) and the Great Northern and City Tube, originally opened for traffic from Finsbury Pavement to Finsbury Park in 1904, and acquired by the Metropolitan in 1913.

In 1912 the Underground Group extended its influence by combining with the London General Omnibus Company, and in addition, by reason of its holdings in the London and Suburban Traction Company, it exercises control over the London United, the Metropolitan and the South Metropolitan Tramways. It is thus easily the most important single unit concerned with passenger transport in London. This tendency to progressive unification will be referred to below in connection with the tramways, and it has also operated on the main line railways. Thus, while the number of separate

[1] Here also an extension to Cockfosters from Finsbury Park is shortly to be constructed. It is to be 7½ miles in length, and its estimated cost is over five million pounds.

transport undertakings remains considerable, the management has been brought into a few hands, a development of great importance in dealing with the London traffic problem as a whole.

II. Physical Extensions: Tramways

There were in 1900 no less than ten different companies owning tramway lines and working services over 115 miles of roadway within the Administrative County of London, and horse traction was employed in every case, with the exception of a section worked by cable at Brixton and another at Highgate.

So long as there existed these impediments of diversity of control and a very limited form of traction, little further expansion of the tramway system was to be expected. But the electric motor, which at the beginning of the present century made possible the development of underground railways, also revolutionised the tramways, while at the same time the L.C.C. began a policy of gaining control of the system by buying out the various companies one by one. As a result of this policy 148·8 street miles of tramways were being worked by the Council in 1913 instead of 24 miles in 1900.

With electric power and unified control the development of the tramways was rapid. On the one hand, operating economies were made possible, particularly in the generation of power; on the other hand extensions were more easily undertaken, existing and separate services being linked up in order to yield greater facilities to the travelling public.

These extensions took place mainly between the years 1906-13. Up to 1906 the engineers were preoccupied with electrification, and after 1913 the heavy capital expenditure involved in laying down track on a large scale was impracticable in view of war conditions, and afterwards of the growing competition of the motor omnibus. During the years named services were inaugurated over a further 33 miles of roadway within

the county of London. Outside the county boundary simultaneous and even more important extensions were being undertaken by the London United and the Metropolitan Electric Tramway Companies, as well as by a number of Borough Councils, as a result of which nearly 100 additional miles of roadway were served by trams. Thus, by March, 1913, there were 349 miles of tramway in Greater London. By 1929 the figure had fallen to 344, a decrease of 13 miles in Outer London being partially compensated by an increase of 8 miles within the county.

It is impossible to recount all these extensions, and a glance at the accompanying map will give a clearer idea of what happened than any number of words. Emphasis must be laid, however, on one or two developments, of greater importance than meets the eye. Foremost among these comes the linking of the northern and southern systems, which was brought about in three stages. First (in February, 1906), the northern system was extended southwards to Aldwych by means of the Kingsway Tunnel. Then, in December of the same year, the southern system was brought within reach of the northern by the laying of track from Westminster Bridge Road across the bridge and along the Embankment to John Carpenter Street. Finally, in 1908, the Aldwych tunnel was driven through from Aldwych to the Embankment, and the last link was forged. So thoroughly did it prove its usefulness that the tunnel is now (in 1930) being deepened in order that double-deck trams may be run through. In 1909, through running along the Embankment was made possible by the further extension of the track to join the existing lines at Blackfriars Bridge. The southern and western systems were similarly joined in 1912, by a line from Putney Bridge to Wandsworth High Street.

Of almost equal importance were the negotiations between the L.C.C. and the various local authorities and companies working tramways outside the county, as a result of which through running arrangements were

concluded. The effect of these arrangements is that the L.C.C. now runs trams over approximately 100 miles of roads beyond the county boundary, in addition to those already covered by its own track.

All these and other similar operations with regard to track and general organisation combined to weld the London tramway system into a homogeneous and comprehensive whole—a consummation which would have seemed almost impossible at the end of last century.

III. Physical Extensions: Omnibuses

It was in the year 1829 that the first omnibus service was operated upon the streets of London, by Shillibeer, along the Marylebone Road. The London General Omnibus Company was formed in 1855, and by 1895 owned, or had a direct interest in, no less than 1,386 out of the approximate total of 2,130 buses daily in operation within the administrative County of London. Its main competitors at that time were three companies which have now either disappeared or have been amalgamated with it, and the story of the London omnibus in the past thirty years, is, to a predominant extent, the story of the growth of the L.G.O.C.

The unity of control lacking in the tramway system was thus already virtually established over the omnibuses. On the other hand, whereas electricity was perfected as a motive power to replace the horse early in the century, it was some years later that the petrol engine became equally efficient. It thus happened that whereas the zenith of tramway development was reached during the years 1906-13, it was not until after the war that the L.G.O.C. attained its greatest expansion.

How the change over from horse to motor traction was effected may be seen from the following table, showing the number of licences issued by the Commissioners of Police for the Metropolis for omnibuses during the years 1903-13.

NUMBER OF OMNIBUSES LICENSED.

Year.	Animal Traction.	Mechanical Transport.	Total.
1903 . . .	3,623	13	3,636
1905 . . .	3,484	241	3,725
1907 . . .	2,557	1,205	3,762
1909 . . .	1,771	1,180	2,951
1911 . . .	786	1,962	2,748
1913 . . .	142	3,522	3,664

In 1908 the average daily run of a motor-omnibus was 120 miles, of a horse omnibus 70, while the average speed of the latter was 5·9 m.p.h., and of the former 7·1.[1] Thus both a faster and a more frequent service could be provided by mechanical means.

These two factors combined made it possible also to operate services over much longer distances than had hitherto been the case. In 1913, for example, routes of over 19 miles in length were being operated, and the whole field of operation was yearly being extended.

The war caused a break, since it took half the omnibuses off the London streets to France and elsewhere. At the same time, however, it greatly stimulated mechanical progress generally, and paved the way for the production, in the immediately post-war years, of better engines and better bodies. Thereupon the rapid expansion of the pre-war years was not only resumed but accelerated, with results that can be studied in the map.

This extension of the motor-bus has probably had as far-reaching social effects as the tunnelling of the underground railways. Compared with tramway and railway, the capital cost required in order to open up a new route is low. There is no need for an expensive permanent way, other than what is provided by a reasonably good road. This not only enables the demand for new routes to be tested without any great risk of capital, but justifies services with a frequency substantially less than would be required to remunerate the heavy capital expenditure upon a tramway. Thus along routes of relatively light traffic in the outskirts of London (often

[1] Present average speed is 9½ m.p.h., see p. 194.

serving as useful feeders to railway stations) the motor-bus is opening up districts hitherto without any public transport service.

IV. Frequency of Service

Sufficient has been said to show that as a result of mechanical improvements and a greater unity of control, the extent of the transport facilities offered to the London public has enormously increased in the past thirty years. But the improvement has not merely been extensive: it has been intensive also, by reason of the greater frequency and speed of all services.

Among the most important factors in this increase has been the use of electricity as a motive power, since it permits much more rapid acceleration than steam. The effect of this may be illustrated from the fact that between the end of 1907 and the middle of 1928, the daily number of suburban trains arriving at the seven London terminals of what is now the Southern Railway rose from 1,230 to 1,926, an increase of over 50 per cent., while between the same dates the aggregate number of suburban trains [1] arriving at the London termini of the other main line systems on which electrification has not taken place, show a rise of less than 1 per cent., from 867 to 873.

On the Underground Railways as a whole, which are of course completely electrified, there has been a steady increase of frequency from the very beginning.

Increased frequency on the trams and buses has to some extent defeated its own ends, the increased amount of traffic in the streets (illustrated in Table IV) leading to congestion and delay. Buses and trams, of course, account for only a part of the increase throughout the area, but they formed 18 per cent. of all the vehicles enumerated in the 1929 census of traffic; [2] and by reason

[1] All trains starting within twenty miles of the termini and stopping to take up passengers at three or more stations within this limit are regarded as suburban trains.

[2] The Police take an annual census of traffic at a large number of points scattered throughout the Metropolis (see, e.g., *London Statistics*, 1927–28, pp. 254–5).

of their size are a much more important factor in congestion than that figure suggests. Improved traffic control, street widening (though proceeding spasmodically and piecemeal), and the greater seating capacity of bus and (to a lesser degree) of tram [1] have done something to alleviate the situation. But the position is still sufficiently serious, and unless some definite policy with regard to the main traffic arteries in the central area is adopted soon, the growth of street traffic in London, and with it probably the growth of London itself, must be checked and restricted.

At the same time it should be recognised that the outer districts have all the advantages of the improved tram and bus services, and little or nothing of their drawbacks.

V. Comfort and Convenience

Not only are the means of conveyance to-day more extensive, more rapid and more frequent, they are also far more comfortable.

The surface railways have changed least in this respect. They were relatively comfortable a generation ago, and are so still. If the modern electric train is more prone to sway than its steam predecessor, it is unquestionably very much cleaner and better lighted. Meanwhile there has been a revolution in the conditions of travel on most of the underground railways. No longer is the unfortunate passenger nearly asphyxiated in the neighbourhood of Baker Street or St. Mary's Whitechapel, and his convenience and comfort are consulted in numberless ways, among which may be mentioned escalators and automatic ticket and change machines.

Trams and buses, which were generally uncomfortable at the end of the last century, are greatly improved to-day. The competition between the two forms of

[1] The old horse bus seated 20–26 and the horse tram 36–40 persons (1900), whereas the standard type of six-wheeler omnibus seats 60 and the "Pullman" tramcar 69 (1930).

transport has had much to do with this, since if one produces any improvement, the other has perforce to follow suit. The trams, for instance, long had the advantage, especially in wet weather, of running covered top vehicles, but in 1925 the L.G.O.C. produced the N.S. type of bus, with a sufficiently low centre of gravity to allow their vehicles also to be roofed over, while both tram and bus now offer the passenger something approaching an easy-chair in place of the original hard wooden bench.

Other marked improvements were the introduction of bogie trucks on the tramcars, and the fitting of pneumatic tyres on the omnibuses. Both services have succeeded in obtaining an exceedingly high standard of efficiency from their drivers and conductors. Particularly in recent years, the public has been at all times kept well informed as to the facilities at their disposal, while the free use of advertisement, in a highly attractive form, has stimulated many activities which have an educational or health-giving value, and for which travel is necessary.

VI. Cost of Travel

To follow out in detail the ramifications of the changes in fare levels on train, tram, and bus during the past forty years hardly comes within the scope of this chapter and the general effects of these changes have already been discussed in the chapter on the Cost of Living (pp. 97–9). The whole question of working-class travel, however, is of sufficient importance to warrant a rather more detailed attention to so-called "workmen's" trains and trams.

It was in the year 1861 that the first Acts relating to cheap workmen's fares on London railways were passed. These Acts imposed upon the North London Railway and the Metropolitan Railway the obligation to run one workmen's train a day in each direction at a fare not exceeding one penny a mile, single journey. Similar provisions were included in later Acts relating

to other London railways. In 1883 the Cheap Trains Act was passed, enacting that if a railway company refused to comply with an order of the Board of Trade to provide adequate workmen's trains it should lose the benefit of the remission of passenger duty. From this time on, an increasing number of trains were run, on which cheap workmen's tickets were available. Most of these trains were run before seven o'clock in the morning, though between 1900 and 1914 an increasing number of services were extended to eight o'clock. Although no generally recognised level existed all fares charged on these trains were less, sometimes considerably less, than 1*d.* per mile for the return journey (i.e. less than $\frac{1}{2}d.$ a mile).

The growth in the number of workmen's trains operated and the number of miles travelled by those trains on railways serving London is indicated by the following table:

Year.	Number of Workmen's Trains daily.	Number of Miles travelled by such Trains daily.
1890	257	1,806
1899	605	4,360
1908	1,474	10,506
1913	1,806	12,937

Though the general level of fares was considerably raised during the war, it was not until 1920 that workmen's fares were changed, and an increase made in that year of approximately 100 per cent. remained in operation until January, 1928, when under a decision of the Railway Rates Tribunal a scale came into force, which however had little effect upon the general level of fares.[1]

[1] Comparing the average receipt per passenger mile (workmen's tickets) during the months of September, 1927, and September, 1928 (such figures are not available for other months), that is to say, for similar months before and after the scale took effect, we find it was ·514*d.* for 1927 and ·487*d.* for 1928. This reduction however is at least partly due to an increase in the average distance travelled, from 6·24 to 6·63 miles.

The underground railways have since 1920 been under statutory obligation not to charge more for workmen's return tickets than the ordinary fares for a single journey.

On the L.C.C. tramways, fares charged on workmen's cars were, with few exceptions, 1*d.* for a single journey and 2*d.* for two-journey tickets, available on any route and in the case of the return journey, at any time. The revision necessitated by the war brought about the following scale:

No. of Fare Sections covered by Outward Journey.	Average Length of Return Journey in Miles.	Workmen's Return Fare.
Up to 4	4·8	2*d.*
„ 8	9·6	4*d.*
Over 8	over 9·6	6*d.*

Workmen's fares form no part of the programme of the omnibus companies.

VII. Growth of Travel

In view of the fact that the facilities of every kind have been vastly increased in every way, without a corresponding increase in price, it would be natural to expect a great increase of travel. How great that increase has been may be seen from Table II, p. 195.

From this Table it appears that for every journey made by public conveyance in 1902, the Londoner now makes three. Before passing to consider the full implications of this revolutionary change, it is of interest to study for a moment the relative growth of the various forms of travel.

Below are given the percentages of journeys made by rail, tram and bus respectively at five years intervals since 1902, additional figures being given for each of the immediately pre-war years and since 1922, in order to make clearer certain tendencies.

PERCENTAGES OF JOURNEYS MADE IN GREATER LONDON BY THE THREE MAIN FORMS OF PUBLIC TRANSPORT, 1902–28.

Year.	Rail Percentage.	Tram Percentage.	Omnibus Percentage.
1902	42	33	25
1907	39	39	22
1911	36	43	21
1912	34	39	27
1913	30	37	33
1917 [War Year]	35	38	27
1922	30	36	34
1923	28	33	39
1924	26	29	45
1925	25	28	47
1926	23	28	49
1927	24	27	49
1928	24	27	49

As might be expected, the railways, the oldest form of organised transport, attracted the largest proportion of passengers in the earlier years. By 1907, however, the tramways had caught up with them, as a result of the unification and electrification already mentioned. After 1911, following the improvement of the internal combustion engine, the bus began to take an increasing proportion of the ever-growing traffic. This process was arrested by the war, because the buses, being more mobile and not needing a permanent way, could be made use of at the Front, with the result that trains and trams recovered ground as modes of transport at home. After the war the omnibus began to gain ground once more, first at the expense apparently of the train, then of the tram also, until to-day it provides practically half the passenger journeys, though as the average length of these journeys is much less than on the railways this does not imply that the omnibus provides nearly half the transport of London.

The bus has been reaping a harvest in the outer districts, which are inaccessible to train and tram by reason of the heavy outlay involved in putting down track; but it may be that the limits of exploitation in this field have

now been nearly reached. Indeed, the figures seem to suggest that the proportion of passengers carried by each form of transport is becoming stabilised, and that an equilibrium may now have been attained among the various modes of travel. Buses and trams, by reason of the fact that they can take up and set down passengers almost anywhere, cater pre-eminently for short journeys. Competition between these two forms of short distance travel has led to great improvements in the amenities offered, and helped to keep down their price. Of all passengers carried by the L.C.C. tramways during the year 1927-28, 57 per cent. were at 1*d.* or ½*d.* fares and 83 per cent. of journeys were at 2*d.* or under.[1] Similarly, 58 per cent. of the passengers travelling on the L.G.O.C. system during the year 1929 travelled at 1*d.* fares and 82 per cent at 2*d.* or less. The percentage of passengers travelling at higher fares is seen to be for the tramways 17 per cent. and for the L.G.O.C. buses 18 per cent.

The underground railways mainly serve for middle distance transport—from 2 to 12 miles. Taking the 1929 results of the Metropolitan District, the London Electric, City and South London and Central London railways together, quite apart from journeys taken by those holding season tickets, which are mainly for the longer distances, only 12 per cent. of the journeys taken are at 1*d.* fares and only 42 per cent. at 2*d.* or less. The percentage of passengers travelling at 3*d.* fares or over by these railways was 54.

The main line railways serve the same purpose as the Underground in those areas where this has not yet penetrated; elsewhere they cater more for the longer distance traffic. This was foreseen as their function so long ago as 1901, when the Superintendent of one of the leading railways stated:

"Personally speaking, I look to the development of electric trams and 'two-penny' tubes as an aid to lines of the English rail-

[1] See Table III, p. 196.

ways to deal with short distance traffic, thus permitting them to make use of their existing lines of metal to carry the longer distance traffic, for with the enormous price the railways have to pay in order to gain an entrance into a city, or to widen their existing lines, it is really impossible, with the small fares that are charged for suburban journeys, to earn a dividend on the large capital expenditures incurred." [1]

How painfully this lesson was enforced may be illustrated by the falling off in the passenger receipts at certain stations, on what is now the Southern Railway, which were eventually perforce closed down. At nine of those stations the aggregate passenger receipts fell by more than 50 per cent. between 1905 and 1913.

In spite of this decline in the inner districts, however, the main line railways play and may continue to play a dominant part in carrying the London suburban population to and from its work.

Two further points remain to be discussed in connection with this section.

First, there is one form of travel which has declined, not merely in comparison with four decades, but even compared with four centuries ago, namely, travel on the River Thames.

Prior to 1902 a private company operated a fleet of thirty-six boats providing a regular service on the river throughout the year. Following its discontinuance a similar service was inaugurated by the L.C.C. in June, 1905, which in sixteen months carried over 7 million passengers. A heavy loss was however incurred, and the service was discontinued in October, 1906. Certain private companies operated boats successfully until the war, but regular services were then abandoned and have not since been resumed, although a limited number of pleasure steamers ply up and down during the summer months.

In the second place, although this chapter professes to deal with public transport only, a section on the growth of

[1] *Railway Magazine*, November, 1901, p. 471.

travel would be incomplete without some mention of private motor cars, motor cycles and pedal cycles. To state even an approximate figure for the number of private carriages at the end of last century is impossible, but there were 97,843 private motor car licences current in London County in the September quarter of 1929, while in place of 10,806 horse cabs in 1893, there were in 1928 7,796 taxis licensed for hire, in addition to 108 horse cabs. These affect only a comparatively small section of the population, however, while the private car (and the motor coach also) is used less as a means of travel in London than as a method of getting out of it. Cycles and motor cycles, on the other hand, are ridden, especially by the young, in every class. Of cycles there were few, of motor cycles none, in 1890; to-day the number of cycles in London must amount to several hundred thousand, and in the September quarter of 1929, 47,443 motor cycle licences were current in the L.C.C. area.

VIII. Economic and Social Causes and Effects of the Increase of Travel

It has been implied, in a previous paragraph, that the increase of travel has been due to the increase and relative cheapening of transport facilities. To a great extent this is true, but it is not the whole truth; and the supply of these facilities has, in large measure, come in response to an economic demand, a demand which has rarely been left unsatisfied for long, and often has been actually anticipated.[1]

Even in Charles Booth's time there was a tendency for London not merely to continue its development as a commercial and administrative centre, but also to increase in industrial importance. This tendency was not only maintained, but accelerated in subsequent years, and placed increasing demands upon central areas

[1] For example, the population of Golders Green in 1907, when it was first served by the Underground, was probably in the neighbourhood of 10,000; the figure at the 1901 census being 8,262, and in 1911 16,616. In 1921 it was 28,633, and it is now estimated to be over 40,000.

for office and factory accommodation. This had a double effect on the distribution of the population. In the first place it concentrated a larger working population on the central areas. Secondly it led to the replacement there of dwelling-houses by offices and factories, with the result that the residential areas were pushed farther out. Both developments imply a demand for transport. The stream was dammed, the pool was there, but the flow could not begin until the channels were cut.

Other factors which have further segregated occupational from residential areas may be mentioned. First, the vast reorganisation of economic life, when the nation's resources had suddenly to be mobilised for the purpose of carrying on the war,[1] coupled with the Rent Restriction Act, which tended to preserve the *status quo* so far as the distribution of residential population was concerned, greatly increased the tendency to work at some distance from the place of residence. Moreover permanent changes in economic activity resulting from the war required a different distribution of the occupied population. And whereas the change in the distribution of occupied persons was relatively large in a short period of time, changes of residence necessarily lagged far behind. Thus there was a natural increase in the amount of travel between place of residence and place of work, an increase which was augmented by the serious shortage of housing accommodation during and after the war.

A further factor assisting the decentralisation of the population has been the almost universal introduction in recent years of the eight-hour day, which has left the workman with more time available for travel to and from his home.

Now although this shifting of the population due to economic causes is undoubtedly the fundamental reason of the increase of transport facilities in the past generation,

[1] Whereas the total amount of travel decreased in the early part of the war period, travel for the purpose of going to and from work increased.

it by no means offers the whole explanation of the enormous growth of travel already mentioned. It must be remembered, above all, in this connection, that by far the greatest proportion of the increase is due to working class travel. In Charles Booth's time workmen travelled but little, being generally employed on the spot, and their families travelled even less. It is still possible to find old folk in London who have rarely, if ever, been outside their own borough boundaries, just as country folk do not leave their own villages. Travel is very largely a habit, a habit which has inevitably been acquired by workmen in the last generation for the reasons already mentioned. With the change over by women from domestic to clerical and industrial occupations, the habit has been acquired by working women also. Once acquired for the purpose of getting to and from work, it has been extended both by men and by women to their leisure hours, whether for purposes of education, amusement, or for visiting friends, and by women especially for their shopping expeditions.

It is pointed out elsewhere (p. 294) that with the development of travel facilities the local music-hall, or the local public-house, are no longer the sole resorts accessible for the leisure hours of workmen and their families.

The range of the housewife's shopping has been similarly extended. Some of the street markets attract custom from neighbouring boroughs (thus, housewives in Deptford and Chelsea go to the Bermondsey and Fulham markets respectively), while large numbers of suburban dwellers converge on various centres for their shopping by means of the cheap fare facilities offered, with results which may be seen in the general prosperity of the great multiple stores, not only in the West End, but also in such places as Peckham and Brixton.

Developments of this kind inevitably tend to standardise prices throughout the London area and to equalise the general quality of the goods offered. Incidentally it may be noted that the travel induced in this

way is cumulative in its effects. The large establishments require large staffs, who have to travel. Shop assistants and shoppers alike have to take their mid-day meals away from home, and hence the phenomenal growth of catering firms in recent years. The restaurants require waitresses, an occupation more highly prized than domestic service into which travel hardly enters, and for which, with more meals taken away from home, there is less need.

So far mention has been made only of the economic reactions of increased travel. But the social effects are equally apparent.

Foremost among these must be the improvement in general outlook as well as in health among those constrained to live under conditions of overcrowding and squalor, which has resulted from the increased opportunities of getting into decent surroundings.

But there have been other and subtler results. Thus the visible signs of class distinctions are disappearing. Chokers, Derby coats and ostrich feathers are rarely to be seen. The dress of the younger generation of working men and women, so far from having any distinctive note of its own, tends merely to copy, sometimes to exaggerate, any particular fashion current in the West End. In the same way paint and powder, once regarded in this class as the marks of the prostitute, are freely used by respectable working girls. With men the pipe has given way to the cigarette, and where it persists it is no longer a clay but a briar. The Cockney dialect and rhyming slang are slowly disappearing while the Cockney twang is spreading to other classes. In fact the whole demeanour of the different social classes has tended towards a closer approximation in the past generation.

It is not suggested that the general improvement of economic conditions and of education, and the influence of the Press, have not been powerful factors in this change. But the change would certainly not have taken place so rapidly had it not been for the much freer mingling of the classes which has resulted from the increase of

travel. In so far as it represents a levelling up of opportunities and a breaking down of class barriers, the change is indeed to be welcomed, but perhaps a word of regret may be allowed to escape for the passing of something original and colourful in the drab monotony of a great city.

IX. Conclusion

The salient fact which emerges from this discussion of the growth of public passenger transport is that the railways, trams and buses of London now carry between them some 8,000,000 more passengers per day than in 1900. The greater part of this increase is, of course, rush hour traffic, representing the movement between place of residence and place of work, and it is particularly suggestive when related to the density maps and statistics regarding population assembled in Chapter II. Some of the travel involved is perhaps useless and even harmful, and it has brought with it problems of danger, noise and street congestion, touched upon elsewhere in this volume,[1] which as yet seem far from solution. Nevertheless, it is a net gain of immeasurable importance that as a result of the achievements of the various transport authorities, Londoners as a whole, and especially poorer Londoners, now have opportunities, which they had not 30 years ago, of living in healthier surroundings, or at least of gaining ready access to open spaces and to recreational centres of all kinds in their leisure hours. The question of improved housing is in fact inseparably linked with that of improved transport, and for this reason in particular, in spite of the astonishing results already achieved in giving the London population increased mobility, much still remains to be accomplished before the problems of overcrowding and decentralisation can be solved.

[1] See pp. 298–300.

CHAPTER VI: TABLES

Table I.—Greater London Passenger Transport.

Item.	1900.	1913.	1929.
Local and Underground Railways.			
1. Route miles open for passenger traffic:	(1900) (1907)		
i. County of London	38·2 65·5	76·3	79·2
ii. Outer London	[4] 29·7	34·3	41·4
iii. Greater London	[4] 95·2	110·6	120·6[1]
2. Train miles operated	5,013,745	18,454,736	24,126,100
3. Average scheduled speed: [1]			
i. Metropolitan District Railway	15·0 m.p.h. (1906)	17·9 m.p.h.	19·3 m.p.h.
ii. London Electric Railway	13·4 m.p.h. (1906)	17·2 m.p.h.	20·3 m.p.h.
iii. City and South London Railway.	[4]	14·7 m.p.h.	19·2 m.p.h.
iv. Central London Railway	13·4 m.p.h. (1906)	14·9 m.p.h.	18·0 m.p.h.
4. Passengers carried [1]	214,537,095	474,708,152	648,772,610
5. Average rate of ordinary fare per mile [2]	·56*d.*	·55*d.*	·79*d.*
Main Line Railways.			
Route miles open for passenger traffic:	(1900) (1907)		
i. County of London	177·3 172·8	173·9	159·9 (Dec. 28)
ii. Outer London	[4] 388·4	384·3	374·2
iii. Greater London	[4] 561·2	558·2	534·1
Omnibuses.			
1. Miles of roadway covered by Omnibus Services	300	467	1,170
2. Car miles operated [3]	42,000,000	110,025,358	215,679,823
3. Average scheduled speed	5 m.p.h.	8½ m.p.h.	9½ m.p.h.
4. Passengers carried	264,503,868	735,741,375	1,912,092,980
5. Average rate of fare per mile	·92*d* (1895)	·59*d.*	·96*d.*
6. Average number of seats per vehicle	20–26 (horse buses)	34 (motor)	50 (motor)
Tramways.			
1. Miles of roadway covered by Tramway Services:			
i. County	115·5	148·8	156·7
ii. Outer London	106·15 (1905)	201·5	188·8
iii. Greater London	—	350·3	345·5
2. Car miles operated	47,940,000(1905–6)	95,900,000	104,290,000
3. Average scheduled speed	[4]	8·8 m.p.h.	10 m.p.h.
4. Passengers carried	340,203,066	812,071,303	1,076,250,997
5. Average rate of fare per mile	·67*d.* (1895) ·52*d.* (1906)	·50*d.*	·68*d.*
6. Average number of seats per vehicle	36–40 (horse trams)	56–78 (electric)	56–78 (electric)

[1] Figures supplied by the London Underground Railways.
[2] Ordinary third-class fares only.
[3] Figures for 1913 and 1929 supplied by the L.G.O. Co. [4] Not available.

TABLE II

Passenger Journeys in Greater London, 1891 and 1901–28.

Year.	Millions of Passengers carried.						Journeys per Head of Population.			
	Railway.			Tram-way.	Omni-bus.	Total.	Rail-way.	Tram-way.	Omni-bus.	Total.
	Local.	Trunk	Total.							
1891	180	—	—	199	159	—	—	35	28	—
1901	237	—	—	341	270	—	—	52	41	—
1902	277	188	465	361	280	1,106	70	54	42	166
1903	291	198	489	394	287	1,170	73	58	43	174
1904	298	207	505	432	289	1,226	74	64	43	181
1905	305	215	520	478	291	1,289	76	70	42	188
1906	329	229	558	509	292	1,359	81	73	42	196
1907	356	233	589	590	330	1,509	84	85	47	216
1908	400	234	634	636	340	1,610	90	90	48	228
1909	411	237	648	688	360	1,696	91	96	51	238
1910	425	243	668	764	377	1,809	93	106	52	251
1911	436	250	686	822	400	1,908	94	113	55	262
1912	436	250	686	797	552	2,035	94	109	75	278
1913	417[1]	250	667[1]	812	736	2,215	91	110	100	301
1914	404	245	649	844	757	2,250	87	114	102	303
1915	440	260	700	852	689	2,241	97	118	95	310
1916	477	270	747	907	721	2,375	104	127	101	332
1917	547	295	842	923	654	2,419	123	134	95	352
1918	610	325	935	992	682	2,609	138	146	101	385
1919	662	353	1,015	1,053	861	2,929	138	143	117	398
1920	690	368	1,058	1,063	936	3,057	143	144	126	413
1921	588	324	912	1,009	932	2,853	122	135	125	382
1922	573	319	892	1,043	994	2,929	118	138	131	387
1923	549	315	864	1,036	1,214	3,114	113	136	159	408
1924	550	316	866	969	1,485	3,320	113	126	193	432
1925	556	319	875	979	1,671	3,525	113	127	216	456
1926	522	299	821	970	1,716	3,507	105	124	220	449
1927	563	323	886	1,009	1,822	3,717	113	130	233	476
1928	591	339	930	1,057	1,912	3,899	118	135	243	496

[1] This decrease is almost wholly due to a change in the method of enumerating through passengers on the underground electric railways.

Ref. p. 267, *London Statistics*, 1927–28.

TABLE III

PASSENGERS CARRIED AT DIFFERENT FARE DENOMINATIONS.

	Underground (excluding Metropolitan), 1929.	Omnibus (L.G.O.C.), 1929.	Tramways (L.C.C.), 1927–8.
½d. Number	—	—	3,399,283
½d. Per Cent.	—	—	—
1d. Number	35,503,569	842,118,893	403,904,052
1d. Per Cent.	12	58	57
1½d. Number	25,340,093	19,994,982	3,229,235
1½d. Per Cent.	9	1	—
2d. Number	60,333,999	334,630,426	182,484,259
2d. Per Cent.	21	23	26
2½d. Number	13,975,341	1,334,923	591,946
2½d. Per Cent.	4	—	—
3d. and over Number	158,598,337	252,924,266	110,566,486
3d. and over Per Cent.	54	18	17
TOTAL Number	293,751,339	1,451,003,495	714,175,261
TOTAL Per Cent.	100	100	100

TABLE IV.—STREET CONGESTION

VOLUME OF TRAFFIC PASSING CERTAIN SELECTED POINTS IN LONDON BETWEEN 8 A.M. AND 8 P.M. ON A SELECTED DATE 1904, 1912 AND 1928.

A. All Vehicles.

Place of Census.	1904.	1912.	1928.
Hyde Park Corner	29,286	41,106	69,903
Trafalgar Square	27,768	34,897	61,088
Piccadilly Circus	27,050	39,322	44,602
High Holborn	14,590	24,286	32,670
Elephant and Castle	16,176	20,782	32,577

B. Omnibus and Tram,[1] and Other Vehicles.[2]

Place of Census.	1904.		1912.		1928.	
	O. & T.	Other.	O. & T.	Other.	O. & T.	Other.
Hyde Park Corner	6,635	22,651	6,175	34,931	8,618	61,285
Trafalgar Square	7,452	20,316	5,587	29,310	11,517	49,571
Piccadilly Circus	7,253	19,797	5,583	33,739	9,587	35,015
High Holborn	—[5]	—[5]	—[5]	—[5]	5,049	27,621
Elephant and Castle	6,194	9,982	7,371	13,511	10,038	22,539

C. Horse Traction, Motor Traction, and Other Traffic.[3]

Place of Census.	1904.[4]			1912.			1928.		
	Horse.	Motor.	Other.[3]	Horse.	Motor.	Other.	Horse.	Motor.	Other.
Hyde Park Corner	26,762	2,524	10,257	26,738	4,111	2,035	60,335	7,533	
Trafalgar Square	20,316	1,942	6,814	25,076	3,007	1,714	52,885	6,489	
Piccadilly Circus	19,817	1,112	8,406	57,855	3,061	1,720	38,660	4,222	
High Holborn	—[5]	—[5]	—[5]	—[5]	—[5]	3,541	22,944	6,185	
Elephant & Castle	12,982	1,833	8,411	5,270	2,861	2,063	19,805	6,328	

[1] The only selected point affected by tram traffic is Elephant and Castle, the figures being as follows: 1904, 3,000; 1912, 4,240; 1928, 4,381.

[2] Other horse- and motor-vehicles, and cycles and barrows.

[3] Cycles and barrows.

[4] Distinction between horse- and motor-traction not made in 1904.

[5] Information not available.

CHAPTER VI: NOTES ON STATISTICS

The figures used for this section have been either extracted from *London Statistics*, or supplied by the courtesy of the London Underground Railways and the London County Council Tramways Department.

(*a*) Railways.

Distinction between "Main-line" and "Underground" (or "Local") Railways.—The division of railways into "Main-line" and "Underground" Railways, though convenient, is yet arbitrary, so that the method of classification requires brief explanation. The term "main-line" includes lines owned and operated by one or more railway company. The London, Tilbury and Southend Railway serving London and towns at considerable distances from London as well as the North London Railway have been regarded as main-line railways; the former having a mileage of some 80 miles in 1904, whilst the operation of the latter was always closely in conjunction with the suburban services of main-line railways.

Among the so-called "Underground" railways have been included the Metropolitan and Metropolitan District Railways. Where a railway is jointly owned by a main-line and Underground railway, it is classed as Underground as long as the Underground railway concerned operates train services. Thus the Whitechapel and Bow railway, which was jointly owned by the Met. Dist. and L.T. & S. railways, the Hammersmith and City railway (3 miles only) jointly owned and operated by the G.W. and Met., as well as the Metropolitan and Great Central Joint, have been classed as Underground railways. The Waterloo and City railway, although owned by the Southern Railway, has also been regarded throughout as Underground.

Route Miles; Train Miles Operated.—The term "route miles" indicates the length of railway line open for passenger traffic, irrespective of whether the line has one, two, or more tracks of line. Train miles have increased to a greater extent than has route-mileage, which indicates a greater train density per route mile. The figures relating to route miles, though derived from *London Statistics*, do not actually appear in those volumes, the method of classification adopted being somewhat different.

Average Scheduled Speed.—Though any figures relating to average "scheduled" speed are incomplete without data relating to punctuality, there is evidence that the latter has somewhat improved as between 1913 and 1929.

Main-line Railways.—It is to be noted that the falling off of route-mileage does not indicate total abandonment of lines, but their closing so far as passenger train traffic is concerned.

(*b*) Omnibuses.

A number of the figures relating to omnibuses are necessarily approximate, due to a lack of information in the year 1900, and to the operations of buses not controlled by the L.G.O.C.

Miles of Roadway covered by Omnibus Services.—Figures for the year 1900 are approximate.

Car Miles Operated.—The figure for 1900 is based upon the number of vehicles licensed.

Average Scheduled Speed.—The figure for 1900 is approximate only, but is supported by evidence before the Royal Commission on London Transport (1904). The later figures are also approximate, and refer only to the L.G.O.C. and its associates.

Passengers Carried, Average Rate of Fares, and Average Number of Seats.—The figures for 1900 are necessarily estimates, for the reasons stated above. The figure for 1895 (0·92*d.*) is approximate, being based upon the rate per mile for the entire route. Conditions had not altered to any important extent by 1900 and the figures may be regarded as comparable with later ones.

(*c*) Tramways.

The figures given under this head relate in general to tramways operating within Greater London, and are mostly derived from *London Statistics*.

Average Rate of Fare per Mile.—The figures for 1895, 1906 and 1913 relate only to tramways operating with the County of London. The figure for Greater London is not obtainable for pre-war years, but would not have differed materially. The 1929 figure is for all tramways operating in Greater London. It will be noted that this figure is larger than that quoted on p. 97 which relates only to L.C.C. fares.

What has been said above with regard to the average rate of fare per mile for omnibuses applies also to the figures for tramways (0·67*d.*) in 1895.

CHAPTER VII

HEALTH

In comparing the present health of the population of Greater London with the corresponding position at the time of Charles Booth's Survey, the outstanding fact that emerges is that the death-rate has declined from about 20 per thousand in 1890–4 to 12 per thousand in 1924–8, or if the necessary correction be made for the abnormal age and sex distribution of the population in the later period, to about 13 per thousand, a fall of nearly 40 per cent.

It is the object of this chapter to analyse these figures more closely, so as to ascertain their real significance in relation to the conditions of life and labour in London, to trace the tendencies which have been in progress during the last thirty or forty years as to the prevalence and incidence of each great class of diseases, especially those diseases which are most closely connected with poverty, and to indicate the main causes and agencies which have led to the striking improvement in health conditions which the statistics disclose.

So much water has flowed under London Bridge since the time of Charles Booth's Survey that it is very difficult to picture clearly in the mind the changing aspects of "Life and Labour of the People in London" over this period. Students of his seventeen volumes who are specially interested in the health of the people in London will not fail to recognise that from the very beginning, and throughout the survey, health in its widest connotation was prominently held in view. They can scarcely fail, moreover, to be reminded of the similar method of

approach adopted in a contemporary writing by Sir John Simon.[1] For among the influences held in Sir John's *English Sanitary Institutions* to be responsible for that "growth of humanity in British politics" which did so much for preventive medicine, pride of place was given to the work of philanthropists, religious and educational reformers, and voluntary workers of all kinds.

I. Four Epochs of Public Health Administration

The findings both of the inquiry of Charles Booth and of the present survey will doubtless in years to come be scrutinised again and again in the light of mortality rates. From this standpoint the year 1839 may be looked upon as heralding a new era, for in that year the Poor Law Commissioners, in reporting upon fevers in the East End of London and elsewhere, urged "the prevention of the evil rather than the mitigation of the consequences of it."

It is fortunate that from 1841 right up to the present time, London death-rates are continuously available, and it is, therefore, convenient and helpful to take 1841 as our starting point, and to divide the period from 1841 onwards into four epochs.

In the *first* epoch, 1841–1864, war was being waged against the diseases then designated "filth diseases"; in the *second* epoch, 1865–1889, the campaign was directed against the so-called "zymotic diseases"—the same old foes really, though they appear under this new name. During these two periods of years the London death-rate fell nearly 30 per cent. i.e., from about 28 to 20 per thousand. The two epochs practically cover the time of emergence and partial realisation of Chadwick's "sanitary idea" (as it came to be embodied in public health and housing legislation), and this second epoch ends just about at the date of commencement of Charles Booth's Survey.

[1] The first Medical Officer of Health of the City of London, then later of the Central Health Department at Whitehall, and, after 1870, of the Local Government Board.

Following upon this comes the *third* epoch, 1890–1910, which may provisionally be styled that of "preliminary public health education," a period witnessing too the inauguration of medical inspection of school children and of maternity and child welfare work; while the *fourth* epoch, 1911–29, is especially characterised by first attempts at "organisation of social services"—pensions, insurance, treatment of school ailments, the development of maternity and child welfare, and the initiation of schemes directed against tuberculosis and venereal diseases. During these last-named epochs the death-rate fell from about 20 (during the influenza years of the early "nineties") to about 13 per 1,000 in 1924–8, a decline of nearly 40 per cent.

It will thus be seen that the great decline in mortality during the half-century preceding Charles Booth's Survey, remarkable as it was, has been followed by a still greater reduction in the subsequent forty years. It is important, however, to note in connection with any attempt to appraise the advances made, that, throughout the greater part of this period of death registration, two important influences had been at work in London. Population had grown both by excess of births over deaths and also by excess of immigration over emigration; both factors, of course, exercising disturbing effect upon the age-constitution of the population and so upon death-rates. The birth-rate increased between the "forties" and the "seventies" from about 30 to 35 per thousand living, and then fell again to about 30 per thousand at the beginning of the "nineties." The decline was continued during the first fifteen years of the present century, so that the rate had fallen below 20 per 1,000 at the commencement of the Great War. These changes brought about first an increase and later a marked diminution in the child population, relatively to the total population of London. There were in 1851 rather less than 300,000 children under 5 years of age in the County area, and then at four successive censuses the number increased, until in 1891 it exceeded 500,000. At

the last census (1921), however, it had fallen again to 376,055.

Excess of immigration over emigration has mainly resulted in the addition of young adults of both sexes, i.e. of persons at the most healthy ages; thus on the whole it has favoured reduction of the London death-rate. Since 1901, however, this particular movement has affected the outer ring of Greater London to a much larger extent than the County of London; inasmuch as in the years 1901–11 (for the first time since 1841) an intercensal decrease of population in the County itself was recorded. With this fall in the figures relating to young adult immigrants there was also manifested, soon after the beginning of the present century, a decline in the numbers of poverty-stricken older men, mainly of the vagrant class, attracted up to that time by the lure of London, to an extent sufficiently large appreciably to influence death-rates, especially from such diseases as phthisis and bronchitis.

The high birth and immigration rates obtaining up to about 1900, taken together with the continued fall in death-rates, tended of course to throw up the numbers of old persons in London. The population over 65 years of age in 1841 numbered less than 70,000, but there was a continuous increase throughout the eighty years (to 1921) when this age-group totalled nearly 260,000. The short life-tables for London [1] show that, of the 371,776 persons aged 5 to 15 living in London in 1841, there would have survived in 1911 some 44,921 persons of ages 75 to 85. The actual number of persons of this age enumerated in the census was 52,352, the excess over the expected number representing in part longer survival, but mainly the increase due to the excess of immigration over emigration in the intervening years.

All the considerations above referred to have exercised influence in reducing the London death-rate, but the reduction is actually greater than appears from a com-

[1] Referred to in the Annual Report of the County Medical Officer of Health (1923, p. 10).

parison of the crude death-rate figures on account of the change of the age-distribution of the population. The effects of this change can only be exactly studied at the Census dates.[1] Thus, if we compare 1921 with 1891, to cover as far as is possible the period between Charles Booth's Survey and the present time, we find that the recorded (or crude) death-rates of males in London fell from 22·9 to 13·9, but if the death-rate be re-computed by applying the actual 1921 rates for each age-group to the age distribution of 1891, the fall would have been greater, viz. from 22·9 to 12·9. The reduction in the number of the very young has been more than balanced by the increase in the number of the old. For females a similar result is obtained.

On the whole then the Charts showing London death-rates (at certain ages and from various causes) clearly reveal the fact that there has been vast improvement in the health of the London population during the last ninety years. The gains accruing from advance in material prosperity, from greater cleanliness, from improved drainage, scavenging, housing, food and water supplies, clothing, and medical, surgical and nursing services, have far outweighed any added risks, especially those arising from greater concentration of population upon area, and the associated developments in inter-communication and traffic between London, the surrounding country and the world at large.

In retrospect, it is now apparent that the early years of the nineteenth century, fraught as they were with dangers which tested the powers of endurance of the people of this country to an extent only equalled recently in the Great War, were in some respects years specially favourable from a public health point of view. The comparative isolation of the country from the rest of the world, and the fact that its battles were fought mainly on the sea and in foreign lands, served to hold in check the epidemics at that time prevailing in the war-stricken areas of the Continent; moreover, the recent introduc-

[1] See explanatory note on p. 242.

tion (just before the close of the eighteenth century) of vaccination appreciably curbed the spread of smallpox, which for many years previously had caused particularly heavy mortality in London. Again, dispensary and hospital services were coming into operation, under the joint influence of the humanitarian spirit and of the advancing knowledge regarding disease-prevention, which was beginning to emerge unmistakably to view.

Shortly after the Napoleonic Wars came to an end, this country entered upon a half century which was to show advance, beyond anything experienced up to that time, in prosperity and in growth of population. It soon found itself, however, face to face with the menace of epidemic disease on a great scale, largely owing of course to being brought into far closer relationship than before with the rest of the world. Fevers, influenza, and cholera aroused the gravest apprehension in London during the second quarter of the nineteenth century, and one sign of the times was a renewed interest in the close study of epidemic diseases, which resulted in 1850 in the foundation of the Epidemiological Society of London.

A full account of the first serious efforts made to combat "Filth Diseases" and "Zymotic Diseases" was given by Sir John Simon in his *English Sanitary Institutions*, which appeared in 1889 and so carried the record forward to the time of commencement of Charles Booth's Survey. A rough notion may be gained of the extent to which all this early public health work affected mortality from epidemics, during the early years of the period of death registration, by looking at the peaks in the charts showing general death-rates and zymotic disease death-rates for each sex on pages 238 and 239, noting especially those of the cholera years 1848–9, 1853–4, 1866, and the influenza year 1847; bearing in mind, too, that save for the appearance of the great influenza epidemic of 1918, no comparable phenomenon has been witnessed during the whole of the last half century of registration.

Before attempting, however, to study in detail the charts showing deaths at different ages and deaths from various causes, it appears desirable to try to envisage accurately the new influences favouring public health which came into operation during the years shortly preceding and following upon Charles Booth's Survey. It will then, after closer study of the charts, be possible to appreciate more fully the nature of the interplay between newly operating factors, and those already functioning at an earlier period but still continuing to exercise cumulative effect throughout the whole of the last half century.

II. Public Health Developments since the Booth Survey

In describing recent Public Health progress, the passing of the Education Act of 1870 and of the Public Health Act of 1875, during the second epoch above referred to, may be regarded as marking the point of culmination of the efforts first made about the middle of the nineteenth century; while the modern era, that of the third and fourth epochs, may be said to commence about the year 1890.

The Housing of the Working Classes Act of 1890 may thus be taken as the appropriate point of new departure, though it must of course be remembered that the said enactment represents the embodiment of all the experience acquired in working the earlier Torrens [1] and Cross [2] Acts; and the spirit which inspired it had already found abundant expression in the appearance of numerous improved housing areas in London, replacing older "slums," cleared under one or other of the many schemes carried out by the Metropolitan Board of Works.

The London County Council, the successor of that Board, was newly entrusted with important additional powers under the Public Health (London) Act 1891,

[1] Artisans' and Labourers' Dwellings Act, 1868, for the improvement or demolition of existing buildings.

[2] Artisans' and Labourers' Dwellings Improvement Act, 1875, for extending the application of the Torrens Act to larger areas.

and its first Medical Officer of Health, Shirley F. Murphy, forthwith instituted a survey of London from the housing point of view. As the outcome of the action undertaken by the Council in succeeding years, the once familiar narrow courts, approached under archways from main streets, sorely lacking in light and air, with their damp, dilapidated and insanitary rooms, gradually disappeared from view; back-to-back houses diminished very greatly in London; and the prevention of the repetition of such evils was in large degree assured on the passing of the London Building Act of 1894. By the time of the outbreak of the Great War a large part of the property coloured black or dark blue on Charles Booth's maps had been replaced by healthy dwellings. Furthermore, the Public Health (London) Act of 1891 greatly strengthened the hands of the authorities in dealing with nuisances and offensive trades, and led to a vast amount of work being done in connection with house drainage and scavenging; while common lodging-houses (also slaughter-houses and cowsheds) came under annual review on licensing days; overcrowding and conditions of dirt and dilapidation in tenement houses were vigorously dealt with; and great advance was made in improving the conditions under which milk and foods of all kinds were sold.

The environment having thus first claimed attention, there followed a succession of campaigns designed to improve the health of individuals. The first of these was the much needed reform of midwifery. A Parliamentary Select Committee had recommended, in 1893, that "No woman should be allowed to call herself, or to practise as a midwife, except under suitable regulations," and so at length the Midwives Act, 1902, was passed "to secure the better training of midwives and to regulate their practice." Hospital provision for maternity cases had meanwhile been steadily improved, and in this connection it may be pointed out that Sir Arthur Newsholme, in a Report on maternity mortality in 1915, referred to "the remarkably low death-rates from

childbearing in Poplar, Stepney, Bethnal Green, Shoreditch, Southwark, and Bermondsey," and observed that it was difficult to dissociate this fact "from the provision for skilled midwifery attendance and ante-natal care already supplied in connection with medical and midwifery schools."

Extension of the principles of preventive hygiene to school children and to infants came next in order, and was inaugurated under the Education Administration Provisions Act of 1907, which made medical inspection of school children compulsory and gave power to provide medical treatment. The Notification of Births Act of the same year made compulsory the notification of birth within 36 hours by doctor, midwife, or parent, and the Children Act of 1908 among its many other provisions, rendered the parents of verminous children liable to prosecution.

At the other extreme of life, old-age was pressing for consideration. Charles Booth had fully realised how largely the burden of years figured among causes of destitution, and his advocacy was largely influential in securing the Old Age Pensions Act of 1908 (later amended by the subsequent Acts of 1914 and 1924); and under these several enactments nearly a million pensioners in the country as a whole were in 1928 receiving pensions amounting in all to £27,000,000 a year. An almost necessary corollary of the Old Age Pensions Act of 1908 was the National Insurance Act of 1911, with its medical and maternity benefits; and following upon this the Pensions Act of 1925 added later over three-quarters of a million new pensioners—insured persons and the widows of such persons, becoming entitled to old-age pensions at 65. The National Insurance Act of 1911, moreover, conferred special powers for the treatment of tuberculosis, both upon Insurance Committees set up under the Act and upon existing Local Authorities.

Reference should, furthermore, be made to schools for the physically defective, nursery schools, open

air schools and evening play centres;[1] also to the Mental Deficiency Act of 1913, not yet fully in operation, passed as it was just on the eve of the Great War. It should, nevertheless, be specially noted that great benefit has resulted from the schools for the mentally defective, in providing which London was very early in the field; defectives, however, whose defect does not date from birth or from an early age are still in need of further care and attention.

Under the Venereal Disease Regulations of 1916, London, acting in conjunction with the Home Counties, has had in operation for twelve years a scheme under which about 12,000 men and 5,000 women (these numbers attained their maxima in 1921 and have since tended to fall) undergo treatment annually in special clinics at the various hospitals. In addition hostel accommodation has been provided for women and young children, who are kept under treatment during the period of infectivity.

III. Special Health Services for Children

Two very important spheres of work which have been cursorily referred to, must now be made subjects of more detailed mention—the Maternity and Child Welfare Service and the School Medical Service. The origin of the former may be traced to France, where the work of Professor Herrgott at Nancy and of Professor Budin in Paris, began in both cases about forty years ago. In this country St. Helens Corporation established an infants' milk depot in 1899, and Battersea was the first London borough to follow this example, in 1902. The milk depot of Finsbury, established by a voluntary committee, advised by the Medical Officer, Dr. (now Sir) George Newman, became in 1904 the direct forerunner of schools for mothers. Dr. J. F. J. Sykes in St. Pancras was similarly concerned in connection with the

[1] There were 95 Special Schools provided by the L.C.C. in 1903, and 163 in 1928, the accommodation rising from 4,654 to 14,664. And while there was only one evening play centre at the earlier date, in 1928 there were 37.

establishment of the St. Pancras school for mothers in 1907, and this school secured forthwith a grant from the Board of Education, and thus set a precedent for the 50 per cent. grant made the subject of special regulations in 1915. The North Islington infant welfare centre established in 1913 by a voluntary committee has done much pioneer work, particularly in showing how voluntary and official organisations (education and health alike) can co-operate with one another. Already in 1917 nearly 100 centres (four-fifths of them under voluntary auspices) were at work in London; and in 1928 there were 224 centres, 72 under municipal and 152 under voluntary committees.

The very instructive photograph appearing in the annual report of Dr. F. N. K. Menzies for the year 1926 made a comparison between two groups of boys in the same Bermondsey school in 1894 and 1924, and again between two groups of infants in a Southwark school, also in 1894 and 1924.[1] These photographs show that a striking improvement, in appearance, in personal neatness and in carriage, has taken place in successive generations of children coming from the same schools. It may be added that the impressions obtained by study of these photographs may be confirmed by examining the diagram showing the progress recorded in London, during the ten years ending 1922, in medical and dental treatment and also as regards cleanliness in the London Schools.[2] In 1927, 78 clinics for the treatment of school children (12 at hospitals and 66 at other centres) were included under the London scheme, and the number of children treated exceeded a quarter of a million annually, as follows:

Defective Vision	40,293
Ear, nose and throat disease	18,176
Minor Ailments	99,766
Dental defects	124,992
Ringworm	644 [3]

[1] Annual Report of London School Medical Officer, 1926. [2] *Ibid.*, 1922.
[3] This last number represents only about one-tenth of the number of fresh cases found as the result of routine examination eighteen years previously.

The question of cleansing is one that comes again and again under consideration in the London Reports. It is interesting to note that in 1902, *one* school nurse was appointed, whose duty it was to deal with ringworm, which had long been causing much loss of school attendance. After 1902 an active school medical department came into existence, and great progress was made. In 1912 the school medical work was placed under the direction of the County Medical Officer.

The cleansing scheme thus gradually introduced by the London County Council has produced a transformation in the condition of cleanliness of school children in London.[1] Sir George Newman's Annual Report to the Ministry of Health for 1917 commented on the differences between London and country children "due in the main to the facilities of treatment, cleansing and supervision provided by the London County Council, which are not similarly available for the country children." The improvement is strikingly illustrated by the fact that the percentage of London children returned as "badly flea-bitten" fell from some 30 per cent. to about 7 per cent. in the fourteen years ending 1922,[2] since when it has fallen still further, the percentage for 1926 (the last year available) having been only 3·7.

As regards infestation by lice, the conditions at the beginning of the present century "were indescribable"; but though by 1913 "personal hygiene instruction and energetic action had effected great improvement" the heads of only about two-thirds of the older girls were free from vermin.[3] Since that date there has been steady improvement, interrupted only by the difficult war years, until in 1928 the percentage free from vermin reached 91·5. It is of much interest to note that this rise in percentages as regards cleanliness stands in close relation with the marked decline in the prevalence of

[1] See Reports for 1913 (p. 185), 1914 (p. 120), 1917 (p. 35), and for 1918 (p. 35).
[2] See Report for 1922 (p. 81).
[3] School Medical Officer's Report for 1924, p. 70.

tuberculous disease of the glands of the neck in school children. An earlier Report states that

"The Cleansing Scheme which played so great a part in this beneficent revolution was at first very unpopular with parents, and great patience and tact were required on the part of the teachers and nurses, as well as the strong support of the Council before the opposition could be overcome." [1]

From its inauguration, the London School Medical Treatment Scheme in one important respect broke new ground. It had been realised from the outset that in view of the advanced state of evolution of the voluntary hospitals, and the social services already rendered by them through their almoners' departments, the London School Service must be developed on similar lines; i.e., worked as a hospital and general practitioners' service, co-ordinating the activities of doctors and social workers and linking them up with the general education services of the Council—and not as a newly constituted *ad hoc* municipal service. An important outcome of this decision was that the wishes of the hospitals were substantially met, and general practitioners were given the opportunity of becoming keenly interested in school medical work.

Dr. C. J. Thomas, who by his close association with school medical work in London for more than a quarter of a century was specially fitted to do so, gave, at the International Conference on Social Work in Paris in 1928, an account of this new development in the London School Medical Service. He observed that a purely bureaucratic system . . . "loses much by refusing to find place and scope for the voluntary worker and the voluntary society, yet . . . in London alone is found an attempt to achieve the impossible and to weave an official system on a voluntary basis."

Dr. Thomas urged that

"The school social service either must be a part of the general social service of the area, or must establish complete co-ordination

[1] See Report of London School Medical Officer, for 1919, p. 52.

and agreement with the other social services in the area, with mutual interchange of information. . . . It must be recognised that what are 'diseases' to the Medical Department are 'symptoms' to the Social Service Department."

The policy adopted by the London County Council in dealing with medical treatment of school children followed the precedent of the school feeding arrangements. A Central Children's Care Sub-Committee was constituted, and in each of the thousand schools a School Care Committee was established to undertake responsibility for the whole of the social service work of the schools in co-operation with the doctor and school nurse. At the beginning of the war this voluntary army of care committee workers (organised by a chief organiser with twelve district organisers, five treatment centre organisers and a suitable staff of assistants) numbered about 5,000, and, after undergoing some depletion during the War, the voluntary workers have risen again to more than their former numbers.

Dr. Thomas added:

"Perceiving the great results that flow from this combination of medical and social effort many of the great hospitals asked that the Council's care organisers might assist the departments dealing with the treatment of child patients, and both the hospitals themselves and the Council have greatly benefited, by this extension of the scheme, in shortening the duration of treatment and ensuring its permanence when a cure has been effected."

To sum up, it has been seen how British Preventive Medicine dates its beginnings from the "growth of humanity in British politics" in the eighteenth and early nineteenth centuries, and its subsequent progress has been sketched; first from the time of its tentative efforts to find practical expression in the founding of hospitals, dispensaries and nursing organisations, then through the period of evolution of the "sanitary idea" (housing, drainage, improvement of water and food supplies, nuisance removal; all these efforts being greatly stimulated by the urgent need of trying to control

infectious disease). Furthermore an account has been given of the continuing operation of these influences and of accelerated progress in building up organised social services, a development which has been much facilitated during the last thirty years by voluntary effort and by the widening interest taken in public health work.

It may now, therefore, be well to apply the test of statistics more closely than has hitherto been done, and to study the extent to which the figures show that these endeavours have been crowned with success in reducing mortality.

IV. Changes in Mortality Rates and their Interpretation

Study of the Charts (pp. 235–7) tracing "mortality at ages" in both males and females shows, speaking generally, a very striking fall throughout the period under review. While, however, on the one hand most of the graphs in Charts I and II after remaining at a comparatively high level from the "forties" to the early "seventies" show an almost steady decline from then to the present time, on the other hand Chart III, infant mortality, displays little or no tendency to decline until after the close of the last century. Moreover with old persons, aged 65 and upwards, there was some slackening in such small improvement as was observed in the early "eighties" and middle "nineties," and even a disposition actually to rise in the early and in the late "nineties." No doubt the fact that the "nineties" were years of marked influenzal prevalence, and that a run of hot years occurred at the close of the decennium, may have helped to favour these phenomena. Unquestionably, however, the main improvement at the extreme ages has only taken place since the beginning of the present century, and the principal cause has been the increasing care devoted to those least able to help themselves, as manifested practically in such work as that carried out in connection with pensions, with mater-

nity and child welfare [1] work and with care-work among school children.

Thus the earlier efforts to secure a more sanitary environment, and to prevent the spread of infectious disease—after exhibiting a latent or incubation period of about a quarter of a century—began during the last thirty years of the nineteenth century to bear fruit, as was indicated by a fall in the general death-rate, and then subsequently, when the factors promoting this decline became reinforced by certain other influences (to which attention will be more specially drawn later), there ensued a marked fall in the death-rates of the very young and the aged people.

Turning now to particular causes of death we may note the following points of special interest:

(*a*) *Epidemic, Endemic and Infectious Diseases.*[2] During the "forties" and "fifties," these diseases (mainly owing to epidemics of cholera, in 1848–49 and 1853–54, and of influenza and fever in 1847) were responsible for 25 per cent. of the total deaths in London. Small-pox had to some extent been brought under control, thanks to earlier action and then later to the Vaccination Act of 1853. After the epidemic of 1871 vaccination was much more effectively enforced and there was steady improvement in respect of securing hospital isolation. Cholera disappeared as soon as effect was given to Chadwick's "sanitary idea." The prevalences of cholera and typhoid fever alike had, up to that time, been ascribed mainly to polluted water supplies, but in the closing

[1] The subject of mortality in child birth is fully dealt with in the London Annual Report for 1928. The graphs on pp. 235–6 are not of course drawn to a scale which would throw light on variations in death-rates from this special cause. The general trend of mortality, however, has been to show decline, but there was a slight setback during the war. It may be here noted that a curious contrast is presented in the graphs for 5–15 and 15–25 during the years 1901–14 and 1921–27. In *females*, 15–25, the rates were higher than those for 5–15, after the war, but generally lower in 1901–14. In *males*, in both pre-war and post-war years, the ages 5–15 compare favourably with 15–25. This anomaly is discussed in the London Annual Report, 1922, pp. 11 and 13.

[2] Nos. 1–30 and 38–42 of the Registrar General's Report, 1929.

decades of the century, it became more and more apparent that sewage-contaminated shell-fish (and in 1900, in the case of typhoid fever, ungutted fish also) might be presumed to be mainly at fault, and upon action being taken to keep out these infected foods, typhoid fever too underwent very remarkable diminution in London.

Certain zymotics, which more particularly affect young children, have shown less disposition to respond to the preventive measures applied. Thus, although deaths from measles and diarrhœa have manifested notable decline, the percentages borne by deaths from these diseases to child mortality from all causes have actually increased in recent years. The death-rate from measles has, however, been substantially reduced, following upon recent action taken by the Metropolitan Asylums Board. Again, although the death-rate from scarlet fever has fallen very remarkably, the prevalence of that disease has not, judging by notification returns, been correspondingly lessened. The recorded prevalence of diphtheria in London has even increased, though here the inclusion of "bacteriological cases" (without clinical symptoms) is in part responsible; on the other hand mortality from this disease has notably fallen since antitoxin has been brought increasingly into early use.[1]

A great pandemic of influenza occurred in 1890, and left its mark on death-rates particularly at ages over 65, and on mortality from epidemic and respiratory diseases during the early "nineties"; the next succeeding pandemic (1918–19) occurring at the close of the War is not shown on the Charts on pp. 235–6 and 238–9,[2] but influenza continued to affect mortality rates, as will be seen in the said Charts during some of the post war years.

(*b*) *Diseases of the Respiratory System.* The graph here includes Bronchitis, Pneumonia and other Diseases of the Respiratory System, and Phthisis, etc. (e.g. Tuber-

[1] The recent behaviour of Scarlet Fever and Diphtheria in London is discussed in the London Annual Report for 1924, pp. 13–18.

[2] The war years are left blank, in view of the uncertainty as to the numbers of the population at risk, owing to absence of men of military age upon war service.

culosis of the Respiratory System). All these causes of death, as will be seen on studying the Charts, are apt to be markedly affected by epidemic Influenza. The group as a whole shows steady decline throughout the years under review, in correspondence with the fall in the general death-rate. The rates for Pneumonia (considered separately) assume, apparently, much greater prominence after 1890, but this is probably wholly a question of altered practice as regards nomenclature. Death-rates from Bronchitis (considered separately) have, on the other hand, fallen very remarkably, and especially has this been the case from a date a few years earlier than that of the commencement of Charles Booth's Survey. The phenomenon is the more noteworthy because of the distinct increase, which has been already commented upon, in the proportion of the population mainly at risk, viz. those who have reached the age of 65.[1] Death-rates from Phthisis declined almost down to the outbreak of the Great War, and there can be no doubt that the improved standard of living, from the "fifties" onwards, had great influence here; some part of the improvement must, however, be ascribed to the influence of migration, especially to the fact that (up to 20 or 25 years ago) an increasing proportion of the sufferers from phthisis left this country, and in many instances died abroad; in later years action taken under the London Tuberculosis Scheme (of which an account is given in the London Annual Report, 1925, pp. 58–69) exercised influence.

(*c*) *Diseases of the Nervous System.*[2] This group shows marked decline in both male and female death-rates during the last fifty years. This is largely attributable to the fall in the death-rates from Convulsions and from Tubercular Meningitis (Acute Hydrocephalus), both chiefly affecting young children;

[1] The 1841 Census figures show 3·4 per cent. of the population as aged 65 or over, as compared with 5·8 per cent. in 1921.

[2] There are included here Nos. 70–86 in the Registrar-General's Reports from 1921 onwards, and in addition—Apoplexy, Hemiplegia (after 1900); Cerebral Hæmorrhage (1901–10); Tubercular Meningitis, Cerebral Embolism and Thrombosis.

the decline under the latter heading being presumably due, in the main, to improvement in milk supplies. At higher ages, the fall must be, in part, associated with development of hospital provision for the insane, which has led to the adoption of improved methods of classification, and doubtless also to an actual reduction in mortality. Decline of intemperance has also affected this group of diseases, and there are indications, too, of some lessening of prevalence of venereal diseases, or at any rate of the death-rate attributable to them. The so-called "new diseases of the nervous system" (encephalitis lethargica, poliomyelitis, and polioencephalitis), of which so much has been heard in the last ten years, are included under "Epidemic diseases," and not under "Diseases of the Nervous System," but they have not affected death-rates to such an extent that their transference to the group now under consideration would counterbalance the marked decline observed in that group as a whole.

(*d*) *Diseases of the Digestive System.* These death-rates also show a decline. The mortality of males (though not of females) shows a small increase during recent years, but the rise is, in part, accounted for by an increase under the heading ulcer of the stomach, and is probably attributable to the improved means of diagnosis now available.[1]

(*e*) *Deaths due to Diarrhœa* are difficult to dissect out separately, but the attempt to accomplish this has been made, and the graphs will be seen to present notable correspondences (in certain years characterised by specially warm summers) with the graph of infant mortality —the death-rates from diarrhœa being of course, particularly in very young children, very markedly influenced by high summer temperature. Thus such years as 1898–1900, 1911 and (in less degree) 1921, stand out as years of high diarrhœa and of high infant mortality. The slight tendency to rise, observable since 1901, is no doubt due to altered nomenclature.

[1] See Annual Report of County Medical Officer, London, 1927, pp. 17–22.

(*f*) *Death-rates from All Other Causes* do not show any marked movement between 1841 and 1927, although there is a slight decline, which perhaps is accounted for by the slight increases in certain diseases, noted elsewhere as being due to improved diagnosis and changes of nomenclature. A few of the heterogeneous causes of death included in this group show as great a decline as deaths from all causes, but this is compensated for by increase under certain other headings, notably under "Diseases of the Heart and Circulation" and under "Cancer." In both these instances the figures have unquestionably been affected by changes in nomenclature, and by alterations in age-constitution of the populations coming under review. Thus intensive study of diseases of the heart and blood vessels has led to the recording under such headings as "valvular disease of the heart," "arterial sclerosis," etc., of deaths which in times gone by would have been registered as due to "Old Age," or would have appeared under the heading "Other ill-defined and non-specified causes." Moreover, the greatly reduced death-rates, at early ages and in middle life, have of course led to registration of more deaths at advanced ages than otherwise would have been the case; hence, too, a marked increase in the number of deaths assigned to cancer and arterial sclerosis, which are especially fatal at advanced ages. In this connection it is well to remember that the death-rate from cancer in London, among females under 65, has actually declined during recent years.[1]

This review of the behaviour of death-rates in London during the past forty years makes it clear that, after making due allowance for changes in the age-distribution of the population and other disturbing factors, certain apparent rises in the rate of mortality (e.g. for cancer, pneumonia, and influenza) are not solely or perhaps mainly attributable to any real increase in those diseases, but have resulted from changes in nomenclature and improved diagnosis. On the other hand the marked

[1] See London Annual Reports (1923, p. 28; 1928, p. 27; and 1927, p. 16).

decrease in phthisis has been caused partly by improved housing and feeding, and partly, though to a lessened degree in recent years, by migration of population. The value of improved public health administration during the past half century can be most conspicuously seen in the chart for zymotic diseases, which shows a marked decline in the prevalence of the chief of these diseases, amounting in some cases to extinction.

The marked decline since 1880 in bronchitis and in diseases of the nervous system is doubtless due partly to altered age-distribution, and partly to changes of nomenclature, but these causes do not explain the whole of the fall. As to the incidence of these diseases in old age and infancy, the improvement is certainly connected with the great development which has taken place in recent years in the care of the old and young, but it seems probable that some part of the improvement at all ages is attributable to the decline in alcoholism and in venereal disease.

Much has been heard of late of the "new epidemic diseases of the central nervous system," and it is, therefore, surprising to find that even after adding the figures for these new diseases, nervous diseases are responsible for a much lower proportion of the deaths in London than was the case sixty or seventy years ago.[1]

V. Influences which have affected Child Mortality

At first sight it would appear that by far the most anomalous of the contours, among those showing deaths at any particular age, is that relating to the age-group 0–1.[2] A generation ago it was, indeed, perplexing to find that infant mortality[3] had for a number of years remained almost stationary, despite the marked decline in the death-rates at all other ages. It was noted, however, that the closing years of the

[1] See Annual Report of the L.C.C. Medical Officer (1925), p. 12.

[2] See the infant mortality chart, p. 237.

[3] The infant mortality rate is the number of deaths at ages under 1 year per 1,000 children born alive in a given year.

nineteenth century were in many instances hot years, and hot weather was, of course, admittedly likely to prove particularly injurious to health in the case of very young children. Again, summer diarrhœa caused high mortality during the "nineties," especially in many of the large towns, and it was a prevalent view at that time that the limit of improvement in urban mortality had nearly been reached. Creighton had quoted [1] the Greek opinion dating from Aristotle's time, to the effect that "ten thousand persons (was) the largest community that could be well governed, fed and kept in health"; and there was the high authority of Dr. William Farr (writing in the late "fifties") to the effect that "large towns . . . can never become as healthy as the country," a forecast which has to say the least been rendered doubtful, in the light of recent death-rates in London, New York, and a number of other densely inhabited cities.

In December, 1904, Dr. J. F. J. Sykes, in reporting upon Infant Mortality in St. Pancras and in London as a whole, pointed out that, while the general death-rate had notably decreased, infantile mortality was not doing so, and he, therefore, strongly urged the inauguration of an infant welfare campaign in London. Some years later in the London School Medical Officer's Report for 1916 attention was called to the changed character, moral and physical, of the parent generation, and to the significance of the fact that "the fathers and mothers of the children born after 1900 had for the most part received the benefits of elementary education." Then, at length, at the Annual Meeting of the British Medical Association at Portsmouth, in 1923, Dr. James Wheatley, the late County Medical Officer of Health of Shropshire, read his paper on "factors contributing to the recent decrease in infant mortality," and supplied the explanation of this decline as being "development of the sense of responsibility of parents for the health and lives of their children." As to the cause of this, he said,[2]

[1] In an article in Traill's *Social England*.
[2] *British Medical Journal*, 1923, II, p. 756.

"The Education Act of 1870 must have been the initial cause, but it has been increased very largely in recent years by a variety of social work, particularly under the child welfare schemes, the medical inspection of school children, and the Children Act."

The decline of the birth-rate had been thought of as a possible alternative cause of the fall observed in infant mortality after the beginning of the twentieth century, but Dr. Wheatley pointed out that the fall in the birth-rate commenced twenty years before the fall in the infant death-rate, and during this period it fell 17 per cent. This was shown in a Table (*vide infra*) which also made it clear that

"the fall in infant mortality commenced long before the passing of the Notification of Births Act, the Maternity and Child Welfare Act, the Education (Administrative Provisions) Act, the Children Act and the Midwives Act, and before any considerable direct efforts to reduce infant mortality. The fall moreover did not commence until twenty-five years after the Public Health Act 1875, with its sanitary service, so that this Act alone appears to have had little influence. The Education Act, 1870, would hardly be likely to produce any considerable influence upon infant mortality for about a generation or say thirty years, taking into consideration the gradual development of the work and the fact that it could only become operative as the school children became parents. This would bring us to 1900."

The figures which were used by Dr. Wheatley speak for themselves and they have been brought up-to-date in Table I opposite. Though these figures apply to England and Wales and not to London separately, the London experience has, generally speaking, been very closely similar to that of the country as a whole, as will be realised by comparing the rates of infant mortality in the Table with those shown for London on Chart III.

Dr. Wheatley makes a special note concerning the decrease of alcoholic intemperance—a decrease doubtless in large degree itself an outcome of education. He points out, moreover, that the effect of this decline upon infant mortality is shown in one direction by the fall in

TABLE I

BIRTH-RATES, DEATH-RATES AND INFANT MORTALITY RATES, IN ENGLAND AND WALES, SINCE 1841.

Average of Years.	Birth-rate (per 1,000 of the Population).	Death-rate (per 1,000 of the Population).	Infant Mortality.		Significant Legislation.
			Rate per 1,000.	Increase or Decrease.	
1841–1850	32·6	21·6	153		
1851–1860	34·1	21·2	154	+ 1	
1861–1870	35·2	21·3	154	—	Education Act, 1870
1871–1880	35·4	20·3	149	— 5	Public Health Act, '75
1881–1885	33·5	18·7	139	— 10	
1886–1890	31·4	18·5	145	+ 6	Housing of the Working Classes Act, 1890
1891–1895	30·5	18·5	151	+ 6	
1896–1900	29·3	17·6	156	+ 5	
1901–1905	28·2	16·0	138	— 18	Midwives Act, 1902
1906–1910	26·3	14·4	117	— 21	Education Act and Notification of Births Act, 1907; Children Act, 1908
1911–1915	23·6	13·8	110	— 7	National Insurance Act and Tuberculosis Order 1911; Notification of Births Extn. Act, 1915
1916–1920	20·1	13·7	90	—20	Venereal Disease Regulations, 1916; Maternity and Child Welfare Act, 1918
1921–1925	20	12·2	76	— 14	
1926–1928	17	11·9	68	— 8	

the deaths from "overlaying" (from 2·05 per 1,000 births in 1891–1900, to 0·60 in 1920–21). He also notes the diminished rate of decrease of infant mortality in 1911–15 (which included the very abnormal year 1911 and the first seventeen months of the war). This period, he adds, was succeeded by a decrease of 18·1 per cent. in 1916–20 and a further decrease of 11·0

per cent. in 1921–22, and, he observes, "This very large fall of about 30 per cent. in seven years following upon a fall of about 40 per cent. in the previous fifteen years, seems to point to some special cause operating during the later period. It was the period of greatest child welfare activity."

In summary he says:

"My conclusions are that the fall of the infant mortality rate has been due chiefly to education. The earlier part of the fall was probably principally due to the operation of the Education Act of 1870 raising the intelligence of the people and gradually increasing the sense of the responsibility of the parents. The latter part of the fall was probably brought about by improvement of general education, and by the special educational influence of the child welfare schemes, aided by the educational work under the tuberculosis and medical inspection schemes, the establishment of district nurses, etc., and other similar work."

Having thus established a *prima facie* case, Dr. Wheatley proceeded to test it in various ways. He sent out a questionnaire to medical officers of towns and counties, from the replies to which he compiled a Table which set out the facts concerning the "fall in infant mortality in certain towns and counties, grouped according to date of commencement of infant welfare work"; and he also made a comparison of infant mortality for 1911–13 with 1920–2, in county boroughs and urban and rural districts. "Examination of this particular Table," he found, "shows no material difference in the decrease of mortality in towns or counties, although the schemes came into operation much later in the counties." He adds later, however, that while "The Education Act of 1870 must have been the initial cause" its influence must have been "increased very largely in recent years by a variety of social work, particularly under the child welfare schemes, the medical inspection of school children, and the Children Act." Dr. Wheatley now further examined, in this same connection, other possible influences such as improved standard of living, improvement of general sanitation, clean milk and dried milk,

lessened horse traffic and tarred roads, ante-natal causes, and climatic conditions.

All his enquiries tended to confirm the main conclusion that the Education Act played the predominant part in determining the fall of infant mortality, and his thesis at once commanded acceptance on the part of most of those who had been closely studying the question in various parts of this country.

During the past half-century the population of London has gradually been transformed into an educated population.[1]

"A reading and discriminating public has been substituted for an illiterate and ignorant public, and though intelligence may not have kept pace with knowledge, a public opinion has grown up which now supports instead of thwarting the efforts of the sanitary reformer. The progress of public health has benefited immeasurably both from the direct and from the indirect effects of the development of the London education service. A single example is afforded by the striking fall of infant mortality, and by the saving of child life, which came about as soon as a generation which had passed through the primary schools had become parents of a new generation." [2]

A cause which had conspicuously influenced infant mortality could scarcely have failed to affect death-rates at other ages also; though it must, of course, be borne in mind that the infant is quite exceptional in the sense that the mother really constitutes its environment. It is interesting, therefore, to find that study of the graphs relating to other ages, during the interval between the completion of the Booth Survey and the commencement of the present one, shows that the death-rates among young children and old people reveal greater improvement since 1900 than do the rates at the intermediate ages.[3]

[1] See Chapter VIII.
[2] See Report of London County Medical Officer for 1925, p. 8.
[3] See Charts, pp. 235–6.

VI. Retrospect and Prospect

The improvement of the standard of living, extending over more than a century, was not associated with anything like so much reduction in mortality rates during the first three quarters, as during the last quarter, of that time. The improvement when it did occur, however, became more and more apparent, acquiring strength as it grew. This will be at once recognised by any epidemiologist who has in mind the famine fevers following the "hungry forties" and those of the cotton troubles of the "sixties," and compares them with the conditions observed in distressed areas in recent years, where the absence of typhus and relapsing fevers stands in most striking contrast with the experience of the last century. These modern instances are necessarily drawn from areas outside London, since it is fortunately long since London has been a distressed area in the sense in which the term is here used.

The health tests applied in the above discussion of results have necessarily been those furnished by mortality rates. These, in fact, supply the only means available for comparing periods 100 years ago, or even forty years ago (the date of Charles Booth's original survey) with the present day. School medical inspections, however, which now cover nearly a quarter of a century of time, generally speaking confirm, so far as they go, conclusions suggested by study of death-rates.

Isolated surveys (for example, those made of the male population of military age on the outbreak of the Great War), and similar examinations of quite a unique kind are of little or no value for the purpose of *comparing* the health of one generation with that of earlier generations, for the reason that there is no agreed standard upon which such comparison can be based. Conclusions drawn from studying results obtained in such isolated surveys cannot be held to outweigh those deducible from the national health returns, which have stood nearly a century of criticism, supplemented and con-

firmed as they are by the results of years of medical inspection of millions of school children.

There is still however much more to be accomplished. Despite the growing sense of individual responsibility, of parental responsibility and of communal responsibility, in all matters pertaining to the public health, in face of the belief in the importance of studying "the art of living together" and of steadily growing co-operation between voluntary and official organisations, there is strikingly apparent at the present time a need of levelling up, and securing for the poorer members of the community still better educational facilities than those they now possess. The years of adolescence are perhaps those of greatest importance as regards health, and it may be reasonably anticipated that the further extension of educational facilities will result in further curtailment of the ravages still caused by certain epidemic and endemic diseases, which though seemingly the most formidable, may perchance, when systematically attacked, prove the most readily preventable.

Turning, however, from the need for education generally to the special need for more knowledge in preventive medicine (with which this chapter is more immediately concerned), it is abundantly clear, despite the progress already made, that extremely difficult problems are now for the first time clearly emerging to view, both in epidemiology and in immunology. The battle entered upon as the result of Edward Jenner's discovery some 130 years ago, has still to be fought out to a finish. The much later researches of Pasteur, Koch and the bacteriologists; of Manson, Ross and the protozoologists; and of still more recent workers who have been engaged in studying ultramicroscopic forms of life—all these have broken new ground which should, in the years to come, prove abundantly fertile, but the harvesting of practical results is being only gradually accomplished. It is indeed only too apparent, in part doubtless owing to the need of riper national education, that preventive methods thoroughly tested and standing ready to hand, are apt

to be but little used, while newly introduced practices, the claims of which are far less fully substantiated, receive from time to time a much larger share of general approval.

A report on diphtheria issued by the Medical Research Council in 1923, drew attention to experiments which appeared to indicate that a natural process of immunisation, in response to exposure to infection, may be at work, and may of itself, in a suitable social environment, be productive of extensive immunity in a short time. Thus it would be wrong to ascribe the duration or permanence of immunity following active immunisation to the injections alone, without taking account of the part played by the natural immunising process.

Considerations such as those referred to in the above paragraphs are of interest in view of the similarity of the recent behaviour of diphtheria in New York and London, despite notable differences as regards practice of active immunisation; and similar observations would appear to apply, with perhaps added force, to the even more important and difficult case of influenza, with its related group of epidemic prevalences, pulmonary, gastro-intestinal and cerebro-spinal. The attainment of the best results in dealing with obscure and difficult problems of this sort can only be made possible of accomplishment by ensuring a larger measure of mutual understanding and co-operation than now exists, between those directly engaged in specialised studies ancillary to the practice of preventive medicine, and an instructed public, who while wishful to "prove all things," will only "hold fast that which is good."

INDEX TO TABLES, CHARTS, NOTES ON STATISTICS, ETC., REFERRED TO IN THE PRECEDING CHAPTER VII, "HEALTH"

PAGE

Table I. Birth-rates, Death-rates and Infant Mortality rates, in England and Wales, since 1841 223

Table II. London death-rates per 1,000 living, 1845–1928 (*a*) Males 230–231

Table III. London death-rates per 1,000 living, 1845–1928 (*b*) Females 232–233

Table IV. Deaths from special causes 234

Table V. Infant Mortality rate and Deaths at ages 65 and over. 234

Chart I. London Deaths. Males (at Ages) 235

Chart II. London Deaths. Females (at Ages). 236

Chart III. Infant Mortality 237

Chart IV. London Deaths. Males (Various Causes) . . 238

Chart V. London Deaths. Females (Various Causes) . . 239

Notes on Statistics used 240–242

Explanatory Note by Professor Bowley, referred to on page 204 242–244

TABLE II. London Death-rates per 1,000 Living, 1845–1928.

(A) MALES.

Age Group.	Cause[1] of Death.	1845.	1850.	1860.	1870.	1880.	1890.	1900.	1910.	1921.[2]	1928.
1–5	I	22·08	14·60	20·45	23·00	15·90	15·51	9·57	7·26	4·31	5·16
	II	9·57	6·90	6·85	6·50	6·11	4·53	3·35	1·79	1·09	0·71
	III	12·94	8·91	12·58	10·40	10·67	10·78	7·44	5·56	3·70	2·64
	IV	2·45	1·58	1·73	1·68	1·20	1·08	0·63	0·38	0·29	0·26
	V	1·57	1·94	1·38	2·01	2·02	1·47	2·06	1·29	1·23	0·24
	VI	4·63	4·86	5·14	4·89	5·11	4·50	3·83	2·58	1·55	1·24
	Total	53·23	38·80	48·13	48·48	41·02	37·87	26·84	18·86	12·17	10·25
5–15	I	2·53	2·31	2·45	4·20	2·29	1·24	0·84	0·46	0·89	0·44
	II	0·93	0·75	0·79	0·85	0·70	0·66	0·49	0·35	0·36	0·28
	III	1·45	0·90	0·96	0·95	0·87	0·72	0·49	0·40	0·29	0·25
	IV	0·19	0·17	0·17	0·15	0·12	0·18	0·10	0·23	0·20	0·11
	V	0·17	0·19	0·08	0·08	0·06	0·07	0·11	0·04	0·03	0·01
	VI	1·78	1·54	1·51	1·64	1·42	1·41	1·36	1·17	0·89	0·90
	Total	7·05	5·86	5·96	7·87	5·45	4·27	3·39	2·64	2·66	1·99
15–25	I	0·93	1·09	0·84	1·05	0·59	0·45	0·56	0·20	0·22	0·15
	II	0·39	0·37	0·41	0·35	0·31	0·31	0·27	0·22	0·23	0·26
	III	3·43	2·91	3·33	3·39	2·42	2·28	1·81	1·25	1·45	1·29
	IV	0·24	0·24	0·18	0·19	0·17	0·18	0·14	0·20	0·18	0·15
	V	0·13	0·15	0·08	0·06	0·05	0·06	0·11	0·01	0·01	0·01
	VI	1·69	1·76	1·71	1·58	1·57	1·48	1·48	1·22	1·12	1·28
	Total	6·82	6·52	6·55	6·62	5·10	4·76	4·37	3·09	3·21	3·14

25–65	I	1·13	1·08	0·88	1·18	0·69	0·70	0·94	0·46	0·46	0·36
	II	2·21	2·32	1·95	2·15	1·86	1·60	1·32	0·95	1·00	0·82
	III	8·83	7·48	8·28	9·25	8·11	8·91	7·47	4·81	3·97	3·27
	IV	1·12	1·04	1·08	1·08	1·04	0·87	0·79	0·69	0·61	0·80
	V	0·37	0·31	0·24	0·24	0·17	0·11	0·15	0·07	0·06	0·03
	VI	4·80	4·81	5·15	5·40	5·73	6·25	6·58	5·55	5·21	5·81
	Total	18·46	17·05	17·58	19·30	17·60	18·44	17·24	12·53	11·33	11·08
65 and over	I	3·90	4·24	3·18	3·07	1·74	1·67	4·34	2·08	1·58	1·26
	II	15·46	18·00	17·34	20·00	18·08	16·31	13·63	9·50	7·50	6·38
	III	27·79	26·83	29·61	31·33	30·06	34·45	29·96	22·54	18·69	12·66
	IV	4·24	3·82	5·55	4·62	4·81	4·50	3·49	2·56	2·33	2·83
	V	2·95	3·76	2·40	2·51	1·85	1·27	1·49	0·79	0·44	0·18
	VI	60·81	49·04	50·72	46·66	46·55	47·60	47·94	45·75	51·08	62·41
	Total	115·15	105·69	108·80	108·20	103·09	105·80	100·85	83·22	81·62	85·72
All Ages	I	4·39	3·42	4·12	5·10	3·43	2·94	2·17	1·39	0·98	0·90
	II	4·26	3·65	3·45	3·64	3·28	2·76	2·11	1·35	1·18	0·98
	III	8·13	6·77	8·21	8·20	7·51	7·91	6·54	4·64	3·86	3·15
	IV	1·26	1·06	1·16	1·09	0·99	0·94	0·80	0·59	0·56	0·65
	V	0·87	1·16	0·74	1·47	1·25	0·91	1·44	0·63	0·68	0·23
	VI	6·35	6·42	6·91	7·10	7·19	7·40	7·55	6·63	6·60	7·58
	Total All Diseases	25·27	22·48	24·60	26·59	23·64	22·85	20·60	15·23	13·86	13·48

[1] See Notes.

[2] Figures for 1920 are not available.

TABLE III. London Death-rates per 1,000 Living, 1845–1928.

(B) FEMALES.

Age Group.	Cause [1] of Death.	1845.	1850.	1860.	1870.	1880.	1890.	1900.	1910.	1921.[2]	1928.
1–5	I	23·11	15·27	20·16	21·91	16·70	16·10	9·92	6·96	4·36	4·98
	II	8·50	5·08	5·64	5·27	4·94	3·48	2·99	1·71	1·02	0·57
	III	11·08	8·47	11·61	9·08	9·66	10·38	6·63	5·08	3·29	2·17
	IV	2·08	1·58	1·58	1·18	1·02	1·02	0·66	0·33	0·31	0·18
	V	1·54	1·80	1·13	1·93	2·29	1·58	1·78	1·12	1·16	0·26
	VI	4·22	4·33	4·69	4·19	4·48	3·66	3·24	2·21	1·11	0·94
	Total	50·52	36·53	44·80	43·57	39·10	36·23	25·22	17·41	11·25	9·10
5–15	I	2·58	2·52	2·74	4·21	2·33	1·49	1·12	0·51	0·90	0·48
	II	0·94	0·73	0·57	0·67	0·62	0·55	0·43	0·34	0·28	0·32
	III	1·74	1·20	1·23	1·02	0·98	0·82	0·60	0·49	0·47	0·26
	IV	0·18	0·19	0·10	0·15	0·15	0·15	0·12	0·17	0·20	0·13
	V	0·14	0·23	0·11	0·10	0·07	0·07	0·06	0·03	0·03	0·01
	VI	1·22	1·17	1·10	0·97	0·97	1·08	1·11	1·00	0·73	0·56
	Total	6·79	6·03	5·87	7·11	5·13	4·17	3·44	2·54	2·61	1·76
15–25	I	0·71	1·05	0·93	1·20	0·74	0·38	0·38	0·24	0·23	0·10
	II	0·34	0·35	0·31	0·33	0·29	0·28	0·21	0·13	0·16	0·13
	III	2·86	2·38	2·73	2·63	1·98	1·53	1·16	0·98	1·42	1·33
	IV	0·30	0·32	0·18	0·22	0·19	0·19	0·19	0·19	0·12	0·08
	V	0·11	0·16	0·04	0·07	0·04	0·04	0·06	0	0·01	0·02
	VI	1·59	1·23	1·09	1·17	1·04	1·29	1·14	0·90	0·87	0·93
	Total	5·91	5·49	5·28	5·63	4·28	3·70	3·14	2·46	2·81	2·58

25–65	I	0·77	1·18	0·77	1·20	0·63	0·64	0·83	0·43	0·35	0·19
	II	1·56	1·51	1·42	1·59	1·39	1·32	1·08	0·81	0·76	0·61
	III	6·02	5·40	5·82	6·16	5·37	5·37	3·93	2·44	2·02	1·40
	IV	1·01	1·13	1·06	1·09	1·06	0·88	0·84	0·63	0·39	0·39
	V	0·37	0·38	0·21	0·21	0·17	0·14	0·13	0·06	0·05	0·03
	VI	4·76	4·35	4·46	4·80	4·90	5·36	5·36	4·54	4·14	4·40
	Total	14·49	13·95	13·72	15·05	13·52	13·70	12·17	8·92	7·71	70·3
65 and over	I	2·69	4·21	2·24	1·82	0·99	1·18	4·37	1·97	1·77	1·22
	II	12·43	16·07	14·39	14·45	14·01	14·06	10·95	8·76	7·43	6·42
	III	18·93	20·84	26·00	26·21	25·80	29·34	25·72	18·63	16·31	10·45
	IV	4·76	4·74	5·12	4·55	4·34	4·31	3·11	2·40	1·85	2·40
	V	2·33	4·29	2·14	2·10	1·88	1·51	1·27	0·72	0·62	0·16
	VI	61·30	46·51	47·33	44·37	41·35	44·92	42·75	38·18	41·87	51·00
	Total	102·44	96·66	97·22	93·50	88·35	95·30	88·17	70·65	69·85	71·67
All Ages	I	3·93	3·33	3·66	4·44	3·18	2·73	2·07	1·28	0·86	0·69
	II	3·29	2·76	2·64	2·80	2·56	2·29	1·81	1·25	1·07	0·91
	III	6·14	5·42	6·58	6·29	5·91	5·95	4·62	3·33	2·86	2·09
	IV	1·18	1·10	1·07	1·03	0·97	0·91	0·80	0·56	0·42	0·44
	V	0·73	1·05	0·62	1·18	1·05	0·77	1·12	0·45	0·45	0·17
	VI	6·37	5·94	6·25	6·43	6·30	6·69	6·57	5·79	5·77	6·60
	Total All Diseases	21·62	19·59	20·81	22·16	19·96	19·34	16·99	12·65	11·43	10·90

[1] See Notes.

[2] Figures for 1920 are not available.

TABLE IV

DEATHS FROM CERTAIN SPECIAL DISEASES OR GROUPS OF DISEASES PER 1,000 LIVING, IN LONDON, 1845–1928.

(TOTAL OF MALES AND FEMALES.)

Type of Disease.	1845.	1850.	1860.	1870.	1880.	1890.	1900.	1910.	1920.	1928.
Bronchitis	0·81	1·42	2·43	2·59	2·85	2·90	1·92	1·10	1·07	0·59
Pneumonia	1·88	1·34	1·52	1·18	1·04	1·43	1·56	1·41	1·18	0·93
Influenza	0·04	0·05	0·04	0·01	—	0·13	0·35	0·09	0·30	0·13
Zymotic diseases . .	4·6	4·1	4·4	6·1	4·5	3·3	2·8	1·4	1·1	0·8
Diseases of the circulatory system . . .	0·82	0·85	1·08	1·14	1·34	1·69	1·57	1·45	1·93	2·88
Brain diseases . . .	1·85	1·62	1·56	1·54	1·45	1·26	1·00	0·60	0·39	0·33
Cancer	0·34	0·38	0·43	0·52	0·59	0·78	0·94	1·01	1·21	1·52
Phthisis	3·25	2·65	2·79	2·78	2·25	2·08	1·74	1·24	1·04	0·89

TABLE V

INFANT MORTALITY RATE AND DEATHS AT AGES 65 AND OVER, COMPARED WITH GENERAL DEATH RATE (ALL AGES, BOTH SEXES), FOR LONDON, 1845–1928.

(MALES AND FEMALES.)

	1845.	1850.	1860.	1870.	1880.	1890.	1900.	1910.	1920.	1928.
Infant mortality rate [1]	149	140	153	164	158	162	159	103	76	67
Deaths at ages 65 and over, per 1,000 living	106	99	101	99	94	98	93	76	71	76
Deaths at all ages (males and females) . . .	23·3	21·0	22·4	24·1	21·7	21·1	18·6	13·7	12·7	12·1

[1] See p. 220, footnote.

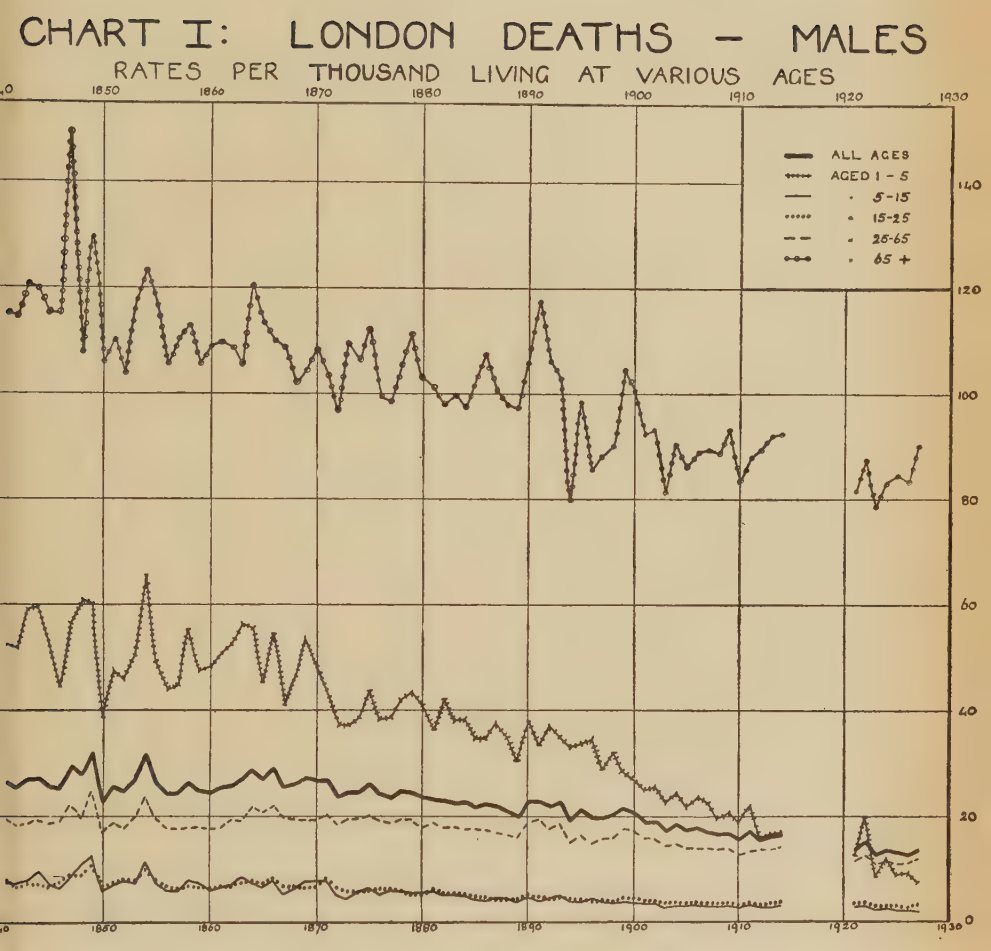


CHART I: LONDON DEATHS – MALES
RATES PER THOUSAND LIVING AT VARIOUS AGES
1850
1860
1870
1880
1890
1900
1910
1920
1930
ALL AGES
AGED 1 – 5
5–15
15–25
25–65
65 +
140
120
100
80
60
40
20
0

CHART II: LONDON DEATHS — FEMALES

RATES PER THOUSAND LIVING AT VARIOUS AGES

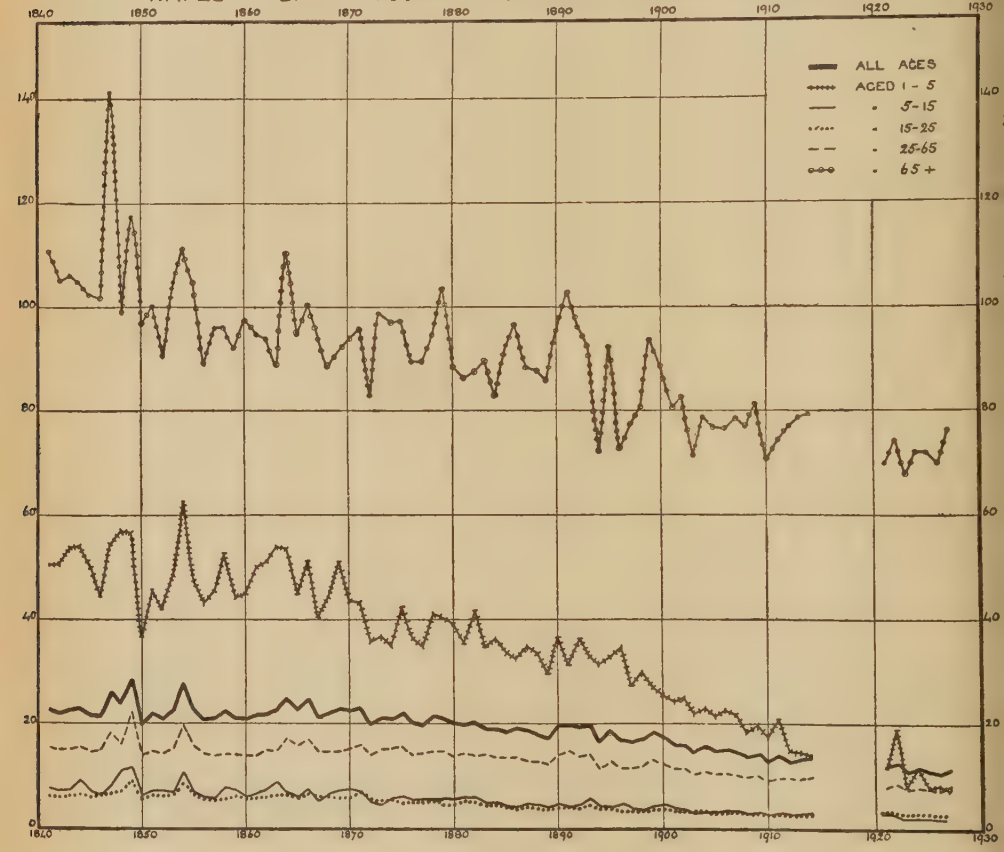


CHART III: INFANT MORTALITY

DEATHS PER THOUSAND BIRTHS

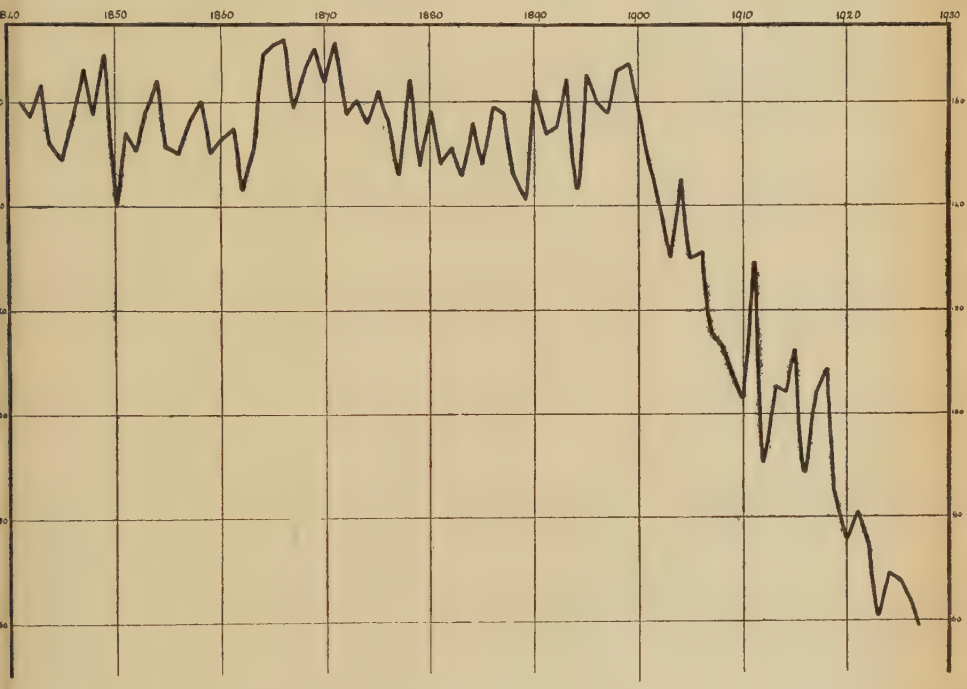


CHART IV: LONDON DEATHS — MALES

RATES PER THOUSAND LIVING, FROM VARIOUS CAUSES

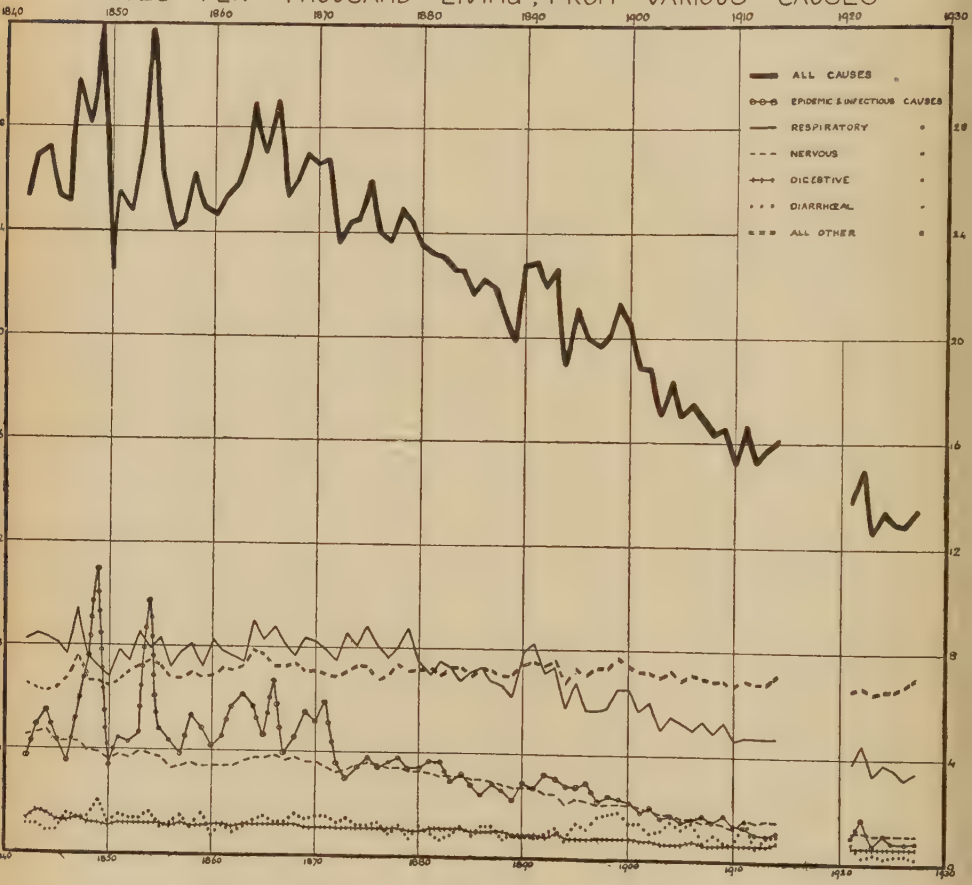
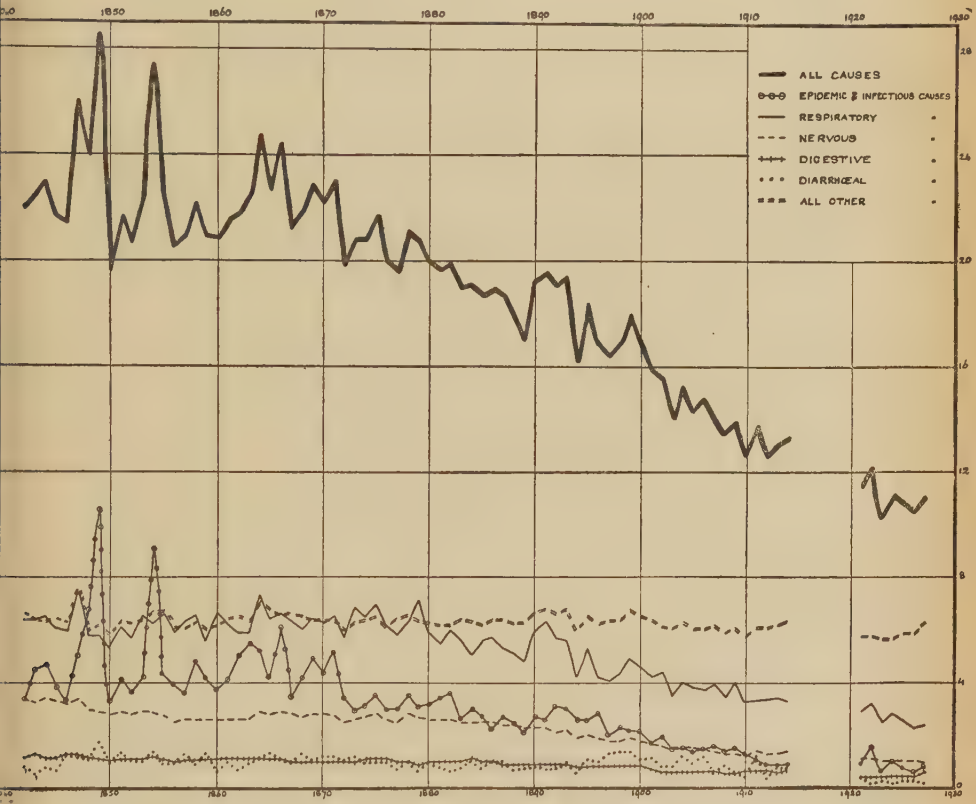


CHART V: LONDON DEATHS — FEMALES

RATES PER THOUSAND LIVING, FROM VARIOUS CAUSES



CHAPTER VII: NOTES ON STATISTICS

Classification of Diseases.

The grouping of diseases adopted is as follows:

		Nos. in R.G.'s Reports, 1921 *seq.*
I.	EPIDEMIC, ENDEMIC AND CONTAGIOUS DISEASES — — —	1–42 excluding 31–37

"Dietetic Diseases," entered as a sub-division of this class after 1857, have been transferred to group VI according to the previous classification. "Parasitic Diseases," given as a separate class 1881 to 1910, and croup, given under respiratory diseases between 1881 and 1910, have been included here as in the earlier and later periods.

II.	DISEASES OF THE NERVOUS SYSTEM — — — —	70–86

In addition: Apoplexy, Hemiplegia (after 1900); Cerebral Hæmorrhage (1901–10); Tubercular Meningitis (Acute Hydrocephalus) after its transference to Constitutional Diseases (No. 32); Cerebral Embolism and Thrombosis (from 1881–1900 these form the greater parts of the groups "Embolism" and "Thrombosis" which have therefore been included in this class during the period in question) and Diseases of Special Sense (negligible), included in 1921 *seq.* but in other Diseases previously.

III.	DISEASES OF RESPIRATORY ORGANS — — —	31, 97–107

In addition: Phthisis, etc. (Tuberculosis of Respiratory System, No. 31); Pneumonia (after 1900).

IV.	DISEASES OF DIGESTIVE ORGANS — — — —	108–127 excluding 113 and 114

In addition: Teething, Dentition.

V.	DIARRHŒA AND ENTERITIS, DYSENTERY — — —	113, 114

Before 1901 this included: Diarrhœa, Dysentery, Enteritis and Gastro-Enteritis. About 1901 this includes: Epidemic Diarrhœa, Infective Enteritis, Diarrhœa (not otherwise defined), Dysentery, Gastric Catarrh (previously part of "Diseases of the Stomach" which was included in Group IV). Other diseases of the Stomach (not malignant, mainly gastric—previously part of "Diseases of the Stomach" included in Group IV), Enteritis (not epidemic). Appendicitis, previously included here, now in Group IV. The effect of the change at 1901 is to add about 8 per cent. to the rate in Group V. This was necessary because the 1901

group chosen agrees best with the later grouping into the two classes which cannot be split up. After 1901 "Diarrhœa due to food" has been excluded as previously called "ptomaine poisoning" and included in Group I. Cholera (under "Diarrhœal Diseases" 1881–1900) excluded here after 1901 and included in Group I. From 1921 an additional heading "Dysentery" (number 16) appears as a sub-division of Group I; it is small and has not been taken out of I or included here.

VI. OTHER DISEASES – – – 33–37, 43–69, 87–96, 128–205
In addition: Rheumatism (from Epidemic, etc.— 1858–1880).

Age-Groups.

The group "1–5" *excludes* those under one year. The group "all ages" *includes* deaths under one year, and the rates are based on the Census population at all ages; this corresponds to the Registrar-General's rate for "all ages."

In the census of 1841 the group of unspecified ages is large. The percentage of those specified only in each age group has been applied to the total, including unspecified, to obtain the numbers used in each age group.

In the census of 1851 persons aged under one year were not distinguished—they have been separated from the total under five years in the mean ratio of the preceding and following census.

The Registrar-General's estimate of population according to age (which has been used from 1911 onwards) does not give the numbers under one year from 1921 onwards; the numbers in the group 1–5 have been estimated by subtracting the survivors of those born in the previous year from the total of those under five years.

Estimated Living Population 1841–1911.

The Registrar-General's reports do not estimate the age-distribution for London before 1911, nor is sex distinguished in the estimated populations of London before 1901. Also the Registrar-General's estimate of the latter is unsatisfactory in the decade 1901–1911, when the censal populations were changing from an increase to a decrease, because his figure continues to increase at the old rate until 1909 and then drops suddenly in 1910 to the 1911 census level. Hence between 1841 and 1911 the populations in the required age groups, distinguishing sex, have been estimated from the census populations as follows:

(*a*) First four years after census: by taking in each year the mean of the populations obtained by increasing the population of the latest census in arithmetic progression by the rate of the previous decade, and the rate of the present decade respectively.

(*b*) The fifth year after a census: mean of previous and subsequent census.

(*c*) Last four years after census: mean as in (*a*) but here increasing at the rate of present and following decades.

Age distribution: estimated by increasing in arithmetic ratio the percentage distribution from one census to the next, and applying this to the estimated totals.

Charts were then drawn of the figures thus obtained and from these the corrections necessary to obtain smooth curves were made.

Death Rates.

In 1841 sex is not distinguished in the figures of deaths according to causes; in this year the rates for persons have been calculated, but no entry appears on the two charts of deaths according to causes.

In the years 1842–44 the numbers of deaths classified by age from 20 upwards are given in decennial groups only; adjustments have been made to divide at 25 and 65 as follows:

Deaths from all Causes per 1,000 Population.

Age Group.	1845.	1846.	1847.	1848.	1849.	Ratio used.
(*a*) *Males.*						
20–25 as percentage 20–30	46	49	47	50	49	48
60–65 as percentage 60–70	49	51	50	52	52	50
(*b*) *Females.*						
20–25 as percentage 20–30	47	46	47	46	45	47
60–65 as percentage 60–70	51	48	50	52	52	51

Rates cannot be calculated between 1915 and 1920 as only the total populations, without distinction of sex and age, are given.

Infant Mortality Rates.

The figures used are the Registrar-General's for deaths of infants of both sexes under one year per 1,000 births.

Area.

The only significant change in the County area is in 1899. Allowance has been made for this in estimating the populations.

Explanatory Note by Professor Bowley (see p. 204)

The following table exhibits the calculation, which would have been more refined if we had taken narrower age-grades. The first pair of

columns, s_1 and s_2, shows the diminished proportion of the young. The second pair, d_1 and d_2, shows the fall in the death-rate in each age-grade. The third pair, s_1d_1 and s_2d_2, obtained by multiplying the former columns and dividing by 1,000, gives the relative contributions to the actual death-rates at the two dates. Thus out of 13·86 male deaths, 3·06 were of children under 5 years in 1921. The last column shows the corresponding distribution of deaths if the death-rates were still d_2, but the age-distribution had been s_1; each of the first three groups would have contributed more, and the two older groups less, and the latter difference outweighs the former.

A. MALES

Age-groups.	Nos. in Age-Groups per 1,000 of Male Population.		Crude Death-Rates.		Contributions of different Age-groups to aggregate Rates.		
					Crude.		On 1891 Age-distribution.
	1891 (s_1).	1921 (s_2).	1891 (d_1).	1921 (d_2).	1891 (s_1d_1).	1921 (s_2d_2).	1921 (s_1d_2).
0–5 .	125	92	71·7	33·3	8·97	3·06	4·17
5–15 .	217	195	3·9	2·7	0·84	0·52	0·58
15–25 .	197	172	4·7	3·2	0·93	0·55	0·63
25–65 .	428	490	19·4	11·3	8·31	5·56	4·85
65 and over	33	51	117·4	81·6	3·88	4·17	2·69
All ages .	1,000	1,000	22·9	13·9	22·93	13·86	12·92

B. FEMALES

0–5 .	114	77	61·6	27·2	7·00	2·10	3·09
5–15 .	198	168	3·9	2·6	0·77	0·44	0·52
15–25 .	204	182	3·8	2·8	0·77	0·51	0·57
25–65 .	439	508	14·5	7·7	6·35	3·92	3·38
65 and over	45	64	102·7	69·9	4·67	4·46	3·18
All ages .	1,000	1,000	19·6	11·4	19·56	11·43	10·74

In the 20 years 1901 to 1921 the changes were in the same direction.

	Crude Death Rates.		Standardised on 1901 Age-distribution.
	1901.	1921.	1921.
Males . .	18·9	13·9	12·9
Females .	15·8	11·4	10·7

CHAPTER VIII

EDUCATION

It does not enter into the plan of the present volume to attempt to present a comprehensive picture of the present state of London education, or of the growth and development of its various branches since the time of Charles Booth's inquiry. It is however impossible to understand the changes which have taken place in the past 50 or 60 years in the conditions of life and labour in London without taking account of what is perhaps the most profound change of all, viz. the transformation of the London working population from a semi-educated to an educated community.

To follow what has occurred it is necessary to go back to a period earlier than the Booth Survey, viz. to the years immediately following the passage of the Education Act of 1870, which started the upward movement. In point of time the closing years of that Survey stand exactly midway between 1870 and the present date. As however the curve of educational expansion rose most steeply in the first few decades, the whole period of Charles Booth's inquiry may be regarded as occupying a central position in relation to the process of transformation.

It is made clear in other chapters how vital is the connection between the stage reached in the education of the people, and the condition and possibilities of improvement of their physical, moral and economic health.

It is the object of the present chapter to present very briefly such comparable data as will enable the process

of educational transformation in London to be traced and roughly measured, in so far as the imperfect tests of figures can be applied to a movement of which some of the highest and most essential elements cannot be quantitatively stated.

For this purpose it has been thought sufficient to confine attention to the County of London, which is covered by the operations of the Education Committee of the London County Council and its predecessor the London School Board. This restriction greatly simplifies a problem which in any case is sufficiently difficult and complex.

In 1851 there were over 190,000 children in London Elementary Schools of all kinds and degrees of efficiency, or (say) 8 per cent. of the total population. It was usual to estimate the children of elementary school class and age at one-sixth of the population, and according to this estimate it would appear that not quite half of these children were in some sort of school in 1851.

By 1871, when the Education Act of 1870 was just beginning to operate, this percentage had increased to 69, but the new London School Board estimated that the proportion of the population of the elementary school class between the ages of 3 and 15,[1] who were actually on the rolls of an "efficient" day school, was only 38·7 per cent. Hence a large proportion of the children for whom some sort of provision existed were in schools not counted as "efficient," while nearly a third of the child population of elementary school age and class was totally unprovided for.

From that date the situation rapidly improved. By 1881 the percentage of children of elementary school class between 3 and 14 years of age who were in "efficient" schools had already risen to over 73, in 1891 it was

[1] The age limits for this 1871 inquiry were 3 to 15, whereas the figures given below for the years 1881 onward are based on age limits 3 to 14. The difference, however, cannot substantially affect the results, since the percentage on School Rolls in 1871 on the 3–14 basis could not exceed 42.

80 or more, and in 1901 it was 85. These figures all apply to children between 3 and 14 years of age. If attention be confined to the children within the age-limits of compulsion (i.e. between 5 and 14) the percentages are much higher. Thus in 1891 the percentage of these children in efficient schools was nearly 92, and in 1901 between 95 and 96. Since that time it has steadily risen until for the past few years it has remained fairly constant, somewhere between 98 and 99.

In effect this means that the problem of school provision has now been solved, and that all but a very small minority of children of school age (whose absence is fully accounted for by special and known reasons) are now being educated in "efficient" schools.

The vast progress made in the last century in bringing the children of the country into schools is illustrated by Table I on p. 262, as well as by the Chart facing p. 268. These figures show for each of a series of years from 1883 to 1929 the percentage of London children, scheduled as being children of the elementary school class and within the ages of compulsory attendance, who were actually on the rolls of efficient schools. The Table cannot be carried back to an earlier date than 1883.[1]

The progress here recorded exercised of course a very striking and immediate effect on the educational equipment and mental outlook of the younger generation. Its effect however in leavening the whole mass of the population, by increasing the percentage borne by the educated to the uneducated element, was naturally much more gradual, and the transformation took longer to complete.

The calculations explained in detail on pp. 265–7 show that in the early years of the Booth Survey, when more than 90 per cent. of the children of school age had already been brought into the schools, probably less than one in four of their parents had themselves passed

[1] See notes, p. 265.

through an "efficient" day school, while nearly half of these parents had received no school education at all. It is to be remembered that in the year 1890 the whole of the London population over 30 years of age must have reached the compulsory limit of school attendance by the year 1873, which for all practical purposes was the first year of compulsion.

Since that time the percentage of parents, and of the whole adult population, who have not received a school education has of course continually diminished, until at the present time it has become an almost negligible fraction. The figures showing for a series of years the estimated proportions of the adult London population of the elementary school class, and of the parents of school children who had at some time passed through an efficient day school, are given in Table II on p. 262. Though there is a considerable margin of uncertainty about these estimates, they are sufficient to indicate and measure roughly the increase in the educated element of the London working population, and the decline and virtual disappearance of the uneducated residue.

If we confine attention to persons between the ages of 25 and 55 (which must include the great bulk of parents of school children) it is estimated that the percentage of such persons without any school education was about 48 in 1891, 35 in 1901, 22 in 1911, and 10 in 1921.[1] At the present time (1929) the uneducated residue is probably less than 5 per cent., and this figure includes all those who, owing to physical or mental defect, or through imperfect machinery for compulsion, escaped school during their childhood.

The crucial importance of this set of figures in relation to general conditions of hygiene appears clearly in the chapter on "Health." For example, the critical period, from which may be said to date a definite and observable change of the prevailing attitude of the working-

[1] The figures for 1891 and 1901 reckon as "educated" all persons who have passed through any kind of school, whereas those for 1911 and 1921 only recognise "efficient" schools.

class population of London towards measures of preventive hygiene, appears to have been the end of the nineteenth and the beginning of the present century. It is impossible to doubt the connection between this change and the growth of the educated element of the adult population and especially of the parents of school children.

It should be explained that the term "elementary school class" is used throughout this chapter to mean the persons belonging to the categories who are accustomed to send their children to public elementary schools. It is in the main an economic classification, since the people who habitually pay fees to send their children to schools of a non-elementary type belong for the most part to the income-tax-paying classes. Most of such families are not scheduled by the School Attendance Officers, and probably the great bulk of them would fall within the sections G and H of Charles Booth's classification. It is not practicable to give statistics showing the proportion of children of the non-elementary school class who are not on the rolls of efficient schools, but the number and percentage must be too small to influence the total figures appreciably. The main problem of the past half century has been to bring within the ambit of efficient school education all the families belonging to the grades by whom public elementary schools are mainly used. And this problem has now been solved.

Striking however as are the above figures, they by no means afford a full measure of the advance that has taken place in the education of the London elementary school population during the period covered. They only show the proportion who, during the years of compulsion, passed through a school classed at the time as efficient. But during the same period there have been other changes in progress, which in the aggregate are of scarcely less importance than the mere gathering of the children into the schools.

For example there has been a marked increase in

regularity of attendance, together with a lengthening of the period of compulsion, the net result being a gradual lengthening of the effective duration of elementary school life. Concurrently there has been a steady improvement in the standard of the education given in the schools, of which a very significant index is the great increase of the teaching force in proportion to the number of pupils.

The present chapter is solely concerned with the long-period changes which can be statistically measured, and, under this condition, the degree of regularity of attendance, the average duration of school life, and the proportion of school staff to pupils are probably the three most instructive indices of efficiency.

The statistics given in Table III show that the regularity of attendance in London elementary schools (as measured by the relation between average attendance and number on the roll) rose from 79 in 1893 to about 87 at the present time.

Table IV relates to the duration of elementary school life, i.e. the number of years over which the attendance in elementary schools of enrolled pupils extends. The methods of estimate are explained in the notes on p. 268. The Table shows that the duration of compulsion has risen from 8 to about 9⅛ years. The extension of the compulsory period has naturally been accompanied by some reduction in the proportion of the elementary school pupils who are outside the limits of compulsion. In 1883 over 85,000 of the children on the school roll, or more than one in seven, were in voluntary attendance. By 1927 the corresponding number had fallen to 63,000 or less than one in ten. The result is that the net average duration of the elementary school life of enrolled pupils, though it has increased, has not risen so fast as the duration of the compulsory period. Thus, since 1883 the length of the compulsory period has increased by 14 per cent., whereas the average duration of elementary school life as above defined has only risen by 7 per cent. This rise, however, would be just

doubled if account were taken of greater regularity of attendance, and some further addition has to be made for the greatly increased number of elementary school children who proceed, with or without scholarships, to secondary, central and trade schools, or other continuation schools, to complete their education.[1]

Still more significant in its effects on the quality of London education has been the steady diminution in the size of school classes, or (to put it another way) the increase in the teaching force in relation to the number of school pupils.

It has been found impossible to obtain trustworthy data for the purpose of this calculation for any year before 1891.[2] The comparison is made between the number of pupils in average attendance, and the number of whole-time assistant-teachers together with those head-teachers who are responsible for a class. Such changes of classification as have taken place are referred to in the note on p. 268, but they do not substantially affect the validity of the comparison.

Broadly speaking, the figures show that in 1893 (in the earlier part of the Booth Survey) there were 16 teachers as above defined to every thousand pupils. By 1903, when that Survey was complete, the proportion had risen to 20 per thousand. Since that date it has risen continuously (except during the war period) until at present the proportion is fairly steady at 28 per thousand.[3] There has thus been an increase of three quarters in the proportionate staffing of the London schools since 1893, which means a diminution of the number of pupils per teacher from 62 to 36.

Everyone who is acquainted with educational methods,

[1] See below, p. 254 *et seq.*

[2] It will be seen that for the years 1891–1906 the data relate solely to Council Schools, but the figures given both for Council Schools and for all schools for the period 1907–29 show that the trend has been generally similar in the non-provided schools.

[3] If those head-teachers who are not responsible for a class were included, the effect would be further to increase the rate of improvement shown in the text.

and who knows the great loss of efficiency which results from the excessive size of school classes, will realise at once the significance of these figures. When combined with the data showing the increased regularity of attendance and the extension of the period of school life they indicate a great rise of educational efficiency since the time when Charles Booth began his Survey. This improvement would appear still more marked if it were possible also to take account statistically of the great improvements which have taken place in the quality of the teachers, the equipment of the schools, and the range of the curriculum, as well as of the increased facilities for continued education in other schools.

So far our estimates have been solely concerned with the extent and quality of the education provided. There is, however, another important aspect of the question of efficiency, viz. the attitude of the recipients, and especially of their parents. There is abundant evidence that this has very greatly changed during the period under review. As the great majority of the children have come to enjoy being at school the motive for truancy has been much weakened. A large part of the improvement however is doubtless to be ascribed to the fact that the parents of present day school children have themselves passed through the schools, and know and appreciate their benefits from personal experience. The results are shown in their wholly changed attitude towards compulsion, the enforcement of which is now generally accepted without question or demur, except by that small and diminishing minority of parents who chafe under all social obligations, and evade their responsibilities wherever possible.

The best index, though of course an imperfect one, of the changed point of view of parents, is afforded by the statistics of proceedings for legal enforcement of attendance, which have been collected in Table VI. These figures, it is true, are by no means easy to interpret, without making allowance for the effect of changes of legislation and of administrative and judicial policy and

arrangements, both on the number of summonses, and on the proportion of convictions resulting therefrom. For example, the great rise in the number of summonses in the decade 1892–1901 is clearly connected with the improved facilities afforded in certain metropolitan areas for dealing with these cases. Similarly the increased penalties for non-attendance under the Education Act of 1900 tended no doubt to cause an eventual reduction in the number of prosecutions, while the increased visitorial staff must have also contributed to the decrease, by rendering legal proceedings in many cases unnecessary.

Nevertheless, after taking all these factors into account it is impossible to doubt that the course of the figures since the beginning of the present century indicates a steadily increasing appreciation of the benefits of education on the part of the population of London. It happens that the maximum number of summonses for non-attendance at school occurred in the year 1900,[1] when it reached the abnormal proportion of 459 per 10,000 children on the rolls. During the decennial period 1900–9, the corresponding proportion averaged 273. In 1910–14 it averaged 122. Omitting the war period, when everything was abnormal, we find that in the decennium 1920–9 the average was 77, and that in 1929 the total was only 51—the lowest figure on record. These figures amply prove that the early unpopularity of compulsory education has practically disappeared in London.

Among so vast a number of children as are provided for by the London elementary schools there are necessarily a certain number of defectives, using the term in its broadest sense to cover physical, mental and moral deficiency. At the present time the great majority of these children are separated from the general mass, and dealt with in schools and institutions of special types suited to their needs. Such institutions are at present attended by about 16,000 children, of whom the majority

[1] In all cases the figures relate to the school years ending March 31.

(over 9,000) are suffering from physical and nearly 6,000 from mental deficiency, the number attending industrial and reformatory schools or other similar training institutions being comparatively small, and having greatly declined in recent years.[1]

Having now dealt with the first function of the elementary school system, viz. to gather the London children within the schools and to give them the rudiments of a sound education, we pass to its second great function, viz. to provide the earlier stages of school training for boys and girls who desire to continue their education, either in full-time or part-time schools, beyond the compulsory age limit.

Apart from such children as stay on until the age of 15, or even longer at the ordinary elementary school, some of whom do individual work of a more advanced type, there are several types of schools to which the children may proceed.

First there are the day Secondary schools, attended by over 37,000 pupils, many of which are old endowed grammar schools, while others have been specially established as County schools by the London County Council. Nearly all of these schools have an arrangement with the Council under which they provide between 13,000 and 14,000 free places. The great majority of these free places are filled by children from elementary schools, of whom over 8,000 hold scholarships providing a maintenance allowance. These figures however by no means exhaust the number of ex-elementary school pupils who, with or without assistance, go on to secondary schools. There are a considerable number of scholarships (probably about 500) awarded annually to elementary school children under various endowment schemes and trusts; in addition a number take advantage of the free places offered by secondary schools, without further assistance. The total number of elementary school children admitted in 1929 to grant-

[1] The number of London children in industrial and reformatory schools in 1905 was 4,691. By 1929 this number had decreased to 1,317.

aided secondary schools in London was 4,525, or over 60 per cent. of the total admissions and about twice the number of scholarships awarded.

Next come the "Central" schools, which are nominally public elementary schools, but which do not receive children from the primary schools until the age of eleven, have a more advanced curriculum, and make special provision for those who stay beyond fourteen. There are at present about 25,000 children in London central schools, of whom over 6,000, or nearly a quarter, are over 14.

Thirdly, there are the "Trade" schools, which are full-time day schools of a definitely vocational character, attended at present by about 5,000 boys and girls between the ages of 13 and 16. Nearly half of those in attendance hold scholarships from elementary schools, which are awarded at the age of 13, and not, like the bulk of the Junior County Scholarships, at the age of 11.

Fourthly, come the part-time day continuation schools, which are attended for from six to fifteen hours weekly by about 10,000 boys and girls, mostly drawn from elementary schools.

Fifthly, there are the Polytechnics and other technical schools and institutes, both day and evening, which are recruited to a substantial extent from ex-elementary school pupils, either directly or after passing through some intermediate school. At present there are about 64,000 students on the rolls of such institutions,[1] and the average number of hours of attendance per student is about 180 per annum.

Lastly there are Evening Institutes of various types and grades, mostly conducted on elementary school premises, which are attended by about 150,000 students, mainly of the elementary school class, of whom about one-third are adults. The average number of hours of attendance per student is about 60 per annum.

In the above enumeration no account has been taken of institutions of university rank, which owing to the

[1] Including all institutes maintained or aided by the London County Council.

age of entry are not fed direct from elementary schools, though a considerable and growing proportion of their students have received the earlier part of their education in such schools. University Extension lectures and the Workers' Educational Association also do a very valuable work in adult education.

It will be seen from this brief analysis how very varied are the means by which children from the elementary schools may continue their education. Even if it were possible to institute long-period comparisons, a mere aggregate total of young persons who continued their education at different dates through one or other of these channels would have little significance, owing to the great differences in respect of standard, length of course, and number of hours attendance.

So far as regards the present time however it may be stated that about 250,000 persons above the age of compulsion are at present annually enrolled in some kind of schools or classes in London, whether day or evening, whole or part time, elementary or advanced, and that of this total [1] rather more than half are over the age of 21.

Of course much the most solid element in this miscellaneous aggregate is the number of children who go on to full-time day schools of various types. Children are for the most part transferred to secondary schools in or about their twelfth year, and as the number of elementary school children aged 11 to 12 is about 61,000, and the number who proceeded last year at this age to a secondary school was roughly 4,300, it will be seen that about one child in fourteen continues its education from 11 onwards at a secondary school. In addition, about 6,500 children (or over one in ten) are annually passed into central day schools. The total number of children between the ages of 11 and 12 who are thus transferred to a more advanced or better-equipped day school is therefore nearly 11,000, or over

[1] In the total are included classes in Elementary Schools for children over the age of compulsion, but not the junior classes in Secondary Schools.

one-sixth of the number of elementary school children of that age. To the above number has to be added about 500 children transferred by scholarship to secondary schools at a later age (usually 13), and also about 2,000 boys and girls who enter day trade schools at the age of 13 or 14. Hence the total annual number of entrants from elementary schools into more advanced day schools must be between 13,000 and 14,000, and of this total the available statistics show that the great majority remain at school beyond the age of 14, and probably nearly half stay beyond the age of 15.

The opening up of an effective flow between elementary and more advanced schools is a comparatively new phenomenon. In 1890, when the position of secondary education in London was reviewed in connection with Charles Booth's inquiry,[1] there were very few publicly administered scholarships leading from elementary to secondary schools, and the total number of scholarships for elementary pupils offered by the secondary schools or by scholarship charities was computed at less than 1,000.[2] Two years later (1892) the actual number of boys and girls from elementary schools attending London secondary schools with scholarships was found to be 1,113,[3] or about one-eighth of the present number. It may be permitted to recall that in 1890, in the volume of the Booth Survey referred to above, the present writer observed that the old endowed schools "still hang in the air with little organic connection with the vast system of State-aided primary education which has grown up underneath them," and the suggestion was offered that "a remedy which would go to the heart of the matter would be to tap the elementary school in the middle instead of skimming it at the top by lowering the age of admission of scholarship holders to 10 to 11."[4] This is the policy which has now been

[1] 1st Series (Poverty), Vol. 3, p. 247.
[2] *Ibid.*, p. 273.
[3] *Report to the London County Council on Technical Education in London* (1892), p. 175.
[4] *Ibid.*, p. 280.

long adopted, "11 plus" being well established as the normal age for transference from the ordinary primary school to secondary and central schools.

The beginning of a serious public effort at co-ordinating elementary and secondary schools was the institution of Junior County Scholarships in 1893 by the newly established Technical Education Board of the London County Council, which in respect of higher education in London was the forerunner of the London Education Committee. In 1894 the number so offered was about 500 (boys and girls), and the annual total was increased to 600 in 1895. The number of these scholarships actually awarded rose steadily from 521 in 1894–5 to 614 in 1903–4. The next great step was made possible by the Education Act of 1902, under which no fewer than 2,167 junior scholarships were awarded by the London County Council in 1905. The totals for subsequent years, though never quite reaching this figure,[1] have been in the neighbourhood of from 1,500 to 2,000.

As already stated, the total number of elementary school children now transferred annually to secondary, central or trade schools, either with or without scholarships, is between 13,000 and 14,000.

The social and economic importance of the change indicated by the above figures is to be measured, not so much by the percentage of elementary school children who are directly affected, as by the proportion borne by the transferred children to the other entrants into secondary and other higher schools. Already such children must form about half the pupils of London secondary schools, and the percentage is bound to increase, while the number who proceed further to a higher school or college must be very considerable. Thus the work of institutions for post-primary education in London is being built more and more every year on the foundation of primary education given up to the age of 11 or 12 in the elementary schools.

[1] The figures for 1905 and the immediately following years were inflated owing to the urgent need of increasing the supply of teachers.

This process of organic connection between the lower and higher grades of education was only just beginning when Charles Booth's Survey was started. Nor even yet has the time come when the profound social and economic effects of the change can be fully realised. The prophecy hazarded in 1890 that the class distinction between elementary and secondary education "may cease to hold good when secondary and primary schools are brought fully into touch with each other," [1] is still far from being completely fulfilled, but it is clear from the figures given that a great advance has been made in the past forty years towards its realisation.

As in 1890 the greatest obstacle to more perfect co-ordination is still the poverty of a section of the parents. The children from the poorer homes are often not only less physically vigorous, but have less ample and quiet means of home-study, while in addition their parents find greater difficulty in making the necessary sacrifice of their earnings to keep them longer at school. These are handicaps which have only been partially removed by maintenance scholarships. The point is illustrated by the following analysis of the Junior County Scholarships awarded in 1927, classified according to the relative poverty and wealth of the area:

	No. of Children in Elementary Schools.	No. of Scholarship Winners.	No. of Scholarship Winners, per 10,000 Children.
Poor Districts [2] . .	205,521	354	17
Other districts . . .	445,922	1,560	35
Total London . .	651,443	1,914	29

It will be seen that in proportion to numbers the children in the poorer areas won less than half as many Junior County Scholarships as those in the rest of London. Nevertheless the percentage of scholarship winners even in the poorest borough in 1927 was con-

[1] Booth Survey, Series 1, Vol. 3, p. 249.

[2] I.e. the Boroughs of Bermondsey, Bethnal Green, Deptford, Finsbury, Poplar, Shoreditch, Southwark, Stepney.

siderably higher than that for London as a whole when Charles Booth began his survey.

The flow from elementary into higher schools is affected not only by considerations of cost, including the sacrifice of immediate earning power, but also by the attractiveness of the higher education offered. The scholarship system is mainly intended to deal with the first of these factors, by removing or mitigating the financial difficulties which impede access to higher education on the part of the children of poor parents. In the long run however it may well be found that the second factor, viz. the general character, utility and attractiveness of the education offered, will play at least an equal part. How far is the type of higher education offered suited to the needs of the more intelligent boys or girls from poor homes? How far is it of a nature to fit them or to unfit them for their life's work?

So far back as 1890 it was thought necessary to stress the point "that a change in the class from which the pupils (of secondary schools) are drawn necessitates a corresponding change in the education provided, and that with the co-ordination of our secondary and elementary school systems the unbroken tradition of purely literary training which has been handed down in our grammar schools from the Middle Ages must come to an end." [1]

To ascertain precisely the extent to which this need of adaptation and re-orientation has since been met, and the various means which have been adopted for the purpose, would require a detailed investigation of the present condition of London Education and its relation to the wants of the people, which lies outside the scope of the present preliminary volume. It is evident however from what has already been said, that the need is already recognised, and that it is to some extent being met by such means as the establishment of central schools and day trade schools.

To summarise briefly the results of the present

[1] Booth Survey, *ibid.*, p. 282.

chapter, it may be said that the primary tasks of securing a school education for every child, and of transforming the working population of London from a semi-educated to an educated community, have now been practically completed, so far as elementary education is concerned. The next great problem, viz. of finding means to enable the more promising children to extend their education beyond the elementary school limit, had already emerged and was attracting increasing attention in 1890, but it was then only being dealt with piecemeal and on a very small scale. Since that date great progress has been made towards overcoming the financial obstacles to progression, though it would be going too far to say that this problem has been finally solved.

In educational matters each forward movement always brings new problems to light, and it is quite possible that the dominant question of the next few years may be that of ensuring that the training afforded by the institutions to which elementary scholars progress, may be best suited to their all-round needs. Such a problem raises difficult questions of the relation of general education to what is termed "vocational" training, and also of the suitability of different types of vocational training to the varying needs of different grades of workers and the conditions of their employment in the changing world of industry and commerce. Moreover these and all problems of educational co-ordination are bound to be affected by the change which appears to be imminent, extending the upper limit of compulsory school attendance.

All these aspects of education, and particularly their reaction on problems of employment and workshop training and the general standard of life, are of course matters of general national interest, which are by no means limited to London. In so far however as they bear directly upon the conditions of life and labour in London they require intensive examination in the course of the present survey.

CHAPTER VIII: TABLES

Table I

Proportion of Children at School

Showing for the undermentioned years the number of London children scheduled as being of the elementary school class and between the age-limits of compulsory attendance; [1] the number of such children on the rolls of efficient schools; and the percentage of this number to the number scheduled.

Year (ending March 31).	Children Scheduled (A).	Children on School Rolls (B).	Percentage of B to A.
1883	540,112	487,738	90·3
1893	645,214	606,890	94·0
1903	709,155	688,341	97·1
1913	712,426	694,487	97·5
1923	647,303	637,500	98·5
1929	581,284	572,448	98·5

Table II

Proportion of Educated Parents

Estimated proportion of adult London population within the age-limits 25–55 at each of the undermentioned dates who had passed through (*a*) an efficient school, (*b*) a school of some kind.

Year.[2]	Number of Persons in Age-group 25–55.	Estimated Percentage of Persons in Column 2 who had passed through— (*a*) an efficient School.	(*b*) any School.
1891	1,606,000	23	52
1901	1,813,000	52	65
1911	1,878,000	78	—
1921	1,897,000	90	—
1929–30	1,897,000	95–6	—

Table III

Regularity of Attendance

Proportion of children between age-limits 3–14 years in average attendance at efficient elementary schools in London, to the average number of children on the rolls of such schools, for the undermentioned years.

[1] Note that compulsory age-limits were 5–14 after 1900.
[2] Census years taken for convenience of calculation.

Year.	Average Number on Rolls (A).	Number in Average Attendance (B).	Percentage of B to A.
1893	700,107	553,480	79·0
1903	762,974	653,124	85·6
1913	725,230	646,858	89·2
1923	685,826	608,218	88·7
1929	625,625	541,888	86·6

Table IV

Duration of Elementary School Life

Estimated average duration of elementary school life of London children scheduled on the rolls of efficient schools.

Year.	Number of Children Scheduled on Roll.		Percentage borne by Column C to Column B.	Duration of Compulsion (Years).	Product of Columns D and E.	Index of Average Duration of Elementary School Life.
	(*a*) Within Limits of Compulsion.	(*b*) Whether within or outside Compulsory Age-limits.				
A	B	C	D	E	F	G
1883	487,738	573,140	117·5	8	940	100
1893	606,890[1]	712,759[1]	117·2	8	938	99·8
1903	688,341	772,596	112·2	9	1,010	107·5
1913	694,487	752,286	108·3	9	975	103·7
1923	637,500	696,099	109·2	$9\frac{1}{8}$[2]	996	105·9
1929	574,978	632,914	110·1	$9\frac{1}{8}$	1,005	106·8

[1] Estimate of School Board.

[2] Does not include children who go on from elementary schools to full-time day schools, at which they continue beyond the age of 14. See also notes.

Table V

Proportion of Teachers to Pupils

Number of permanent teachers responsible for classes in London elementary schools per thousand pupils in average attendance.

Year.	Council Schools.	Council and Non-provided Schools.
1893	16	—
1903	20	—
1913	24	24
1923	25	26
1929	28	28

Table Va

Average Number of Pupils per Teacher, for the same Years

Year.	Council Schools.	Council and Non-provided Schools.
1893	61·8	—
1903	50·2	—
1913	42·0	41·0
1923	39·3	38·6
1929	35·7	35·3

Table VI

Enforcement of Compulsion

Average number of summonses dealt with for the purpose of enforcing attendance in each of the undermentioned quinquennial periods; and the number of such summonses per 10,000 between compulsory age-limits on the school rolls.

Period.	Average Annual Number of Summonses.	Average Annual Summonses per 10,000 Children.
1880–4	12,670	270
1885–9	12,780	236
1890–4	13,580	264
1895–9	20,870	332
1900–4	23,280	347
1905–9	13,640	199
1910–14	8,480	122
[War period]	—	—
1920–24	6,140	93
1925–29	3,610	60
Maximum year (1900)	28,836	459
Minimum year (1929)	2,966	51

CHAPTER VIII: NOTES ON STATISTICS

The main sources of the data used in this chapter are as follows: The School Board Annual Reports; the L.C.C. Annual Reports; the Final Report of the School Board, 1871–1904; and "London Statistics." Tables I, III, V and VI are abstracts from a fuller compilation of annual [1] statistics dating from 1871 (Tables I, III, and VI) or 1893 (Table V), to which occasional reference is made below.

[1] The Education year ends in December up to 1884; after that, it ends on March 31.

Table I. Children in Attendance at School,

Under the London School Board the number of children for whose education the Board was to be responsible (i.e. who were "scheduled") was defined by reference to the houses in which the children lived. It included all houses rated at £25 or less, with additions sufficiently comprehensive to cover all working-class children, and "any children whose education, it is supposed, has been neglected." The maximum limit was raised to £28, and canal-boat children specifically included, when the L.C.C. took over (1904); while since 1923 the maximum has been omitted.

School Board figures have been adjusted so far as possible to make them comparable with those of the L.C.C. There are no figures of children between the compulsory age-limits scheduled for 1873–83; estimates only (made by the S.B.L.) exist for 1891, 1893, and 1894.

Table II. Proportion of Adult Population at Different Dates which had received a School Education.

This Table is the result of a special and rather complex estimate, and needs some explanation.

For each of the years 1891–1921 the population aged 25–55 was obtained, in quinquennial age-groups, from the Census. For each of these groups [1] the average period during which attendance at school was compulsory could be calculated. Thus the age-group 35–40 in 1921 born in the years 1881–5, entered school five years later in the years 1886–90 and left eight years later, between 1893–8, the school life of the whole group lying between 1886–1898, an inclusive period of 13 years (14 years for younger age-groups, affected by the extension of the compulsory period after 1900). The percentage of children who attended school between the compulsory age-limits is known for each year, and the average of these over 13 years was used as indicating the percentage of the age-group concerned who passed through an efficient school. The summary of the working for the year 1901 is given below by way of illustration (see p. 267).

For the years 1873–82, figures needed for the calculations had to be estimated from the (known) data of (1) the aggregate number on the Average Roll (aged 3–13) and (2) the scheduled numbers of children aged 3–5 and 5–13 respectively, for 1871 and 1883.

A number of special estimates had of necessity to be made for data prior to 1871. Thus, e.g., in order to obtain a figure for the age-group 50–55 (many of whom passed through non-efficient schools) in 1911, comparable with those of younger age-groups, it was necessary to calculate the number of those who passed through efficient schools between the compulsory age-limits.

[1] Consideration of migration into and out of London was ignored.

The percentage of the child population in schools for the years 1851 and 1871 is given as 48·7 per cent. and 69·4 per cent. respectively, and the average of these (59 per cent.) has been taken for 1861. This figure relates, however, to children aged 3–13. In 1871, roughly one-half of the 3–5 class were in schools, which seems to have been fairly true in earlier years: while at this period the 3–5 group were approximately two-ninths of the group 3–13. The figure for 1861 was, therefore, raised in the proportion 10 : 9 to arrive at a figure for the 5–13 class.

Prior to 1850, estimates of the proportion of those who passed through any elementary school are even more difficult, though enough figures were collected to make estimates possible. These are given in the Table below.

Proportion of Total Population in Attendance at Elementary Schools (London).

Year.	Estimated Proportion.	Source of Estimate.	Remarks.
1818	1 in 24	Estimates of Lord Brougham, from Commissions of 1818 and 1833 (England)	All schools.
1833	1 „ 15		No compulsory attendance. Inspection begun only in last years.
1851	1 „ 12	Calculated for London from Census of Education, 1851	
1871	1 „ 9	School Board Inquiry	
1871	1 „ 15	„	Efficient schools only.
1881	1 „ 8	„	8 years compulsory school-life.
1901	1 „ 6	„	

(Estimated) Percentage [1] of the "Elementary School Class" [2] in Schools.

Year.	All Schools Percentages.	Efficient Schools only.
1818	25	—
1833	40	—
1851	49	—
1871	69	38·7
1881	—	73·3
1901	—	85·0

[1] Estimated thus, e.g., for 1818. Board of Education estimated that 1 in 6 (i.e. 4 in 24) of the total population were of elementary school age. If 1 in 24 of the total population attended school, then 1 in 4 of elementary school age attended school = 25 per cent.

[2] Aged 3–13 up to 1900, 3–14 after.

For all the age-groups who received education prior to 1870 the period of 8 years was retained as the length of school life, though it was probably much less. But having regard to the nature of the calculation this was not considered of major importance.

The computation of a figure for 1929 depended on securing an estimate of the age-distribution of the London population for this year. If the age-distribution of 1921 remained unchanged the proportion of those attending an efficient school would have been 95 per cent. No data of the actual present age-distribution are existent, but estimates based on reasonable assumptions show that the change in age-distribution since 1921 would not be likely to increase this figure beyond 1 or 2 per cent. The estimate of 95–97 per cent., therefore, appears to be quite tenable for the proportion of the present population (1929–30) between the ages 25–55 who have attended an elementary school between the compulsory age-limits.

ESTIMATED PROPORTION OF POPULATION AGED 25–55 IN 1901, WHO HAD PASSED THROUGH (*a*) AN EFFICIENT SCHOOL, OR (*b*) (PRIOR TO 1870) ANY SCHOOL.

Age-group.	Period of School Life of Group.	Average of the Proportion in School between (*a*) Compulsory Ages (5–13); (*b*) 3–13.	Numbers in Age-groups at 1901 Census (000's).	Product of Columns C and D.
A	B	C	D	E
25–30	1876–1888	(*a*) 85·5	438	374
30–35	1871–1883	(*a*) 72·3	371	268
35–40	1866–1878	(*a*) 58·5	320	187
40–45	1861–1873	(*a*) 41·0	271	110
				52%
45–50	1854–1868	(*b*) 59·0	226	136
50–55	1848–1853	(*b*) 54·0	187	101
				13%
—	—	—	1,813	1,173 (65%)

Table III. Regularity of Attendance.

The number of children on the rolls, and numbers in attendance are available from 1871 and refer to efficient schools, and age-limits 3–13 (up to 1900) and 3–14 (after 1900).

Table IV. Average Duration of School Life.

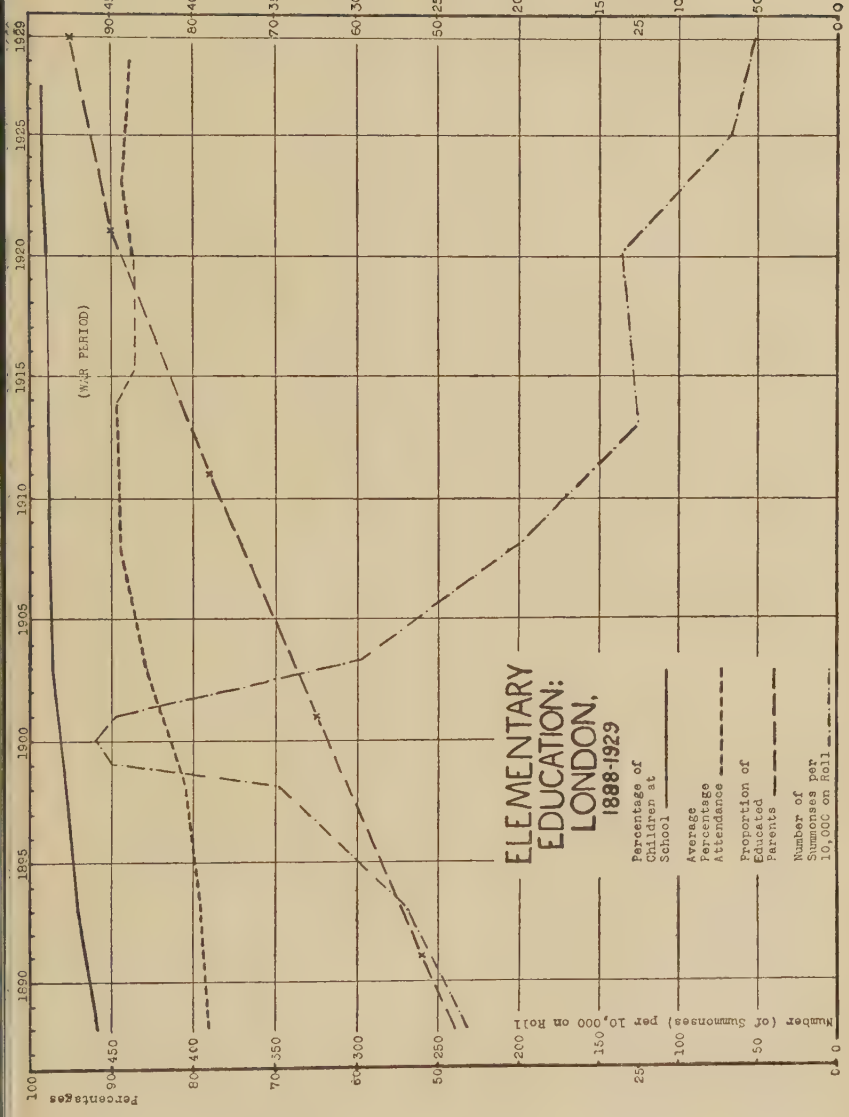
In this Table the compulsory education periods (Column E) are 5–13 (1871–1900) and 5–14 (1900–20); while from 1921 onwards $9\frac{1}{8}$ is the figure used by the L.C.C. to allow for the fact that children are not allowed to leave school until the end of the term in which they attain the age of 14. For the years 1913–27, the numbers on the roll omit defectives aged over 14, numbering from 1,400 to 2,700.

Table V. Proportion of Teachers to Pupils.

From 1907 figures are available for "Council Schools" and "Council and Non-provided Schools" separately. From 1906 onwards "Supply" and "Unattached" teachers at work are excluded, though previous to 1906, half of the "Unattached" class are included as it was calculated they were filling vacancies for permanent teachers.

Table VI. Enforcement of Compulsion.

Attendance summonses relate to proceedings under the Education Acts (consolidated in 1921). In the data used for this Table, estimates were made for the numbers on the rolls for the years 1880–82, 1921–2, 1926 and 1928.


ELEMENTARY EDUCATION: LONDON, 1888-1929
Percentage of Children at School
Average Percentage Attendance
Proportion of Educated Parents
Number of Summonses per 10,000 on Roll
(WAR PERIOD)
Percentages
Number (of Summonses) per 10,000 on Roll
1890
1895
1900
1905
1910
1915
1920
1925
1929

CHAPTER IX

PUBLIC AMENITIES AND THE MEANS OF RECREATION

The growth of a great city like London inevitably brings with it serious and sometimes baffling problems of amenities. Each new phase and mode of development is liable to impair or threaten some means of health or enjoyment or to compel some alteration in the customary way of life. Sometimes, especially in a transition period, when the prejudicial effects of a change are apt to be most obvious and distressing and its ultimate benefits are not yet in sight, there may be a disposition to regard the growth of a great aggregate of population, as Cobbett looked on the much smaller London of his day, as an unmixed evil, a merely morbid process, or, as he savagely termed it, a "great wen."

But gradually, sometimes very slowly, the collective power of the community is exerted to bring the new development under control, to limit its more obnoxious features, and enable its full advantages to be reaped, until as the colours of some crude new building are toned and mellowed under the influence of time, the conditions which seemed so alarming when new may be brought into harmonious relation with their general environment.

The history of the growth of London is marked by a continuous struggle between the forces which make for amenity, and those which generate what, for want of a better name, may be termed "dis-amenity,"—a struggle arising out of the constant emergence of new wants and means of satisfaction, and the efforts of the community, sometimes successful, sometimes not, to

reconcile their discordant results, and to harmonise them with the common life of the people.

For example, one of the most vital wants of a great and growing urban population, and one which is continually threatened by the mere process of aggregation, is a sufficient supply of fresh air to breathe and of open space for rest and recreation. Hardly less important is the provision of ample means of self-culture and healthy amusement within the reach and means of the mass of the inhabitants. Both these needs require for their satisfaction a swift and effective system of locomotion, but the development of this is inevitably attended by the "dis-amenities" of traffic danger, congestion, noise and vibration.

Similarly an ugly concomitant of commercial enterprise is too often the defacement of streets, viaducts and public places by glaring advertisements; the more general use of open spaces brings with it the drawback of litter and refuse; and the multiplication of dwelling houses, factories and power stations, raises problems of smoke and air pollution.

Only a few of these aspects of London life and growth can be touched on in the present chapter.

I. Parks and Open Spaces

As the built-up area of London spreads outwards, and buildings grow upwards, and gardens shrink and disappear in the central districts, the need becomes more and more insistent for open breathing spaces, for quiet refuges from the growing clamour and danger of the streets, and for the means of obtaining restful or active recreation for old and young alike. Thus the problem of parks and open spaces is, in a sense, the converse of the London housing and traffic problems. It is however also a question of amenity, for green grass, trees and flower-beds are the most beautiful sights that can meet the eye amid the drab monotony of a crowded district.

Some of these advantages can be obtained from enclosed spaces to which the public has no actual access,

such as private gardens or London squares, which act as lungs for the neighbouring area, and greatly enhance its attractiveness, unless their beauties are concealed by high walls or forbidding railings or blackened shrubs. But the full benefit of these spaces can only be obtained if they are accessible, and the term "open space" in the present chapter is confined to gardens and parks which are open to the public.

Within the London Survey Area there are at present 536 open spaces as thus defined, with a total area of 9,627 acres or 168 acres for every 100,000 inhabitants.[1]

As will be seen below, these open spaces vary in size from a fraction of an acre to several hundred acres, and they are scattered very irregularly over the London area, so that there are very great differences in the extent to which they supply the needs of the population of different parts of London. Thus Greenwich has less than 250 inhabitants for every acre of open space, while Shoreditch has nearly 12,000.

The functions of the smaller and of the larger open spaces are so different as regards the means of recreation which they provide, that it is convenient to classify them according to size into four categories, viz. under 1 acre, 1 to 5 acres, 5 to 100 acres, and 100 acres and upwards. Of the first class, such a small square as Arbour Garden, Stepney, may serve as an example; of the second, Tunnel Gardens, Poplar; of the third, Waterlow or Southwark Parks; and of the fourth, Hyde Park or Woolwich Common.

The number and acreage of open spaces belonging to each of these categories in 1891 and 1928 are shown below.

Open Spaces.	Number.		Acreage.	
	1891.	1928.	1891.	1928.
Under 1 acre	90	232	39	94
1 and under 5 acres . . .	73	139	143	285
5 and under 100 „ . . .	60	139	1,753	3,542
100 acres and over . . .	22	26	4,649	5,706
Total . . .	245	536	6,584	9,627

[1] Penge is included in the Survey Area throughout this Chapter.

The table shows increases under every heading, but it is to be remembered that during the same period there has been a considerable growth of population. The resulting changes in the proportion borne by open spaces to population in each part of the Survey Area are discussed below (see p. 276).

By far the greater part of the open spaces in the London Survey Area are maintained by H.M. Government, the London County Council, the local Borough Councils, or the City Corporation. A few however are managed by other bodies, e.g. the Conservators of certain commons. The Government maintains a small number of the larger parks, the Borough Councils a large number of open spaces mostly small in area, while the London County Council is responsible for much the largest aggregate area, though by no means the greatest number of open spaces. Thus nearly one half of the entire acreage of open spaces within the London Survey Area (4,681 acres out of 9,627) is maintained by the London County Council, but the number of separate open spaces under its control is less than one quarter of the whole.

The outstanding feature of the forty-year period under consideration has been the growing consciousness of the need of the London population for access to parks and gardens, and also (especially in the latter part of the period) the increased importance attached by public opinion to the supply of means of active recreation and games in the parks. The attitude both of the general public and of the controlling authorities towards the need for open spaces and playing fields is clearly indicated by the series of Acts of Parliament (1893, 1905, 1906 and 1926) by which the powers of the London County Council and other Local Authorities in respect of these matters have been enlarged and consolidated during the period. Much of the credit for the formation of a healthy public opinion on this subject is due to the strenuous exertions of unofficial bodies such as the Metropolitan Public Gardens Association,

of which for many years the late Earl of Meath was Chairman. In recent years the London Playing Fields Association has shown great activity in promoting the use of open spaces for games.

The growth of open spaces in or near London since the time of the Booth Survey can be readily traced by reference to Table III on p. 305, which also enables their acreage at different dates to be compared with the total extent and population, not only of the Survey Area as a whole, but of each of the three rings of boroughs (inner, middle and outer) into which it has been divided.

It will be seen that on the whole the acreage of open space has increased from 6,584 in 1891 to 9,627 in 1928, a rise of just over 3,000 acres or 46 per cent. Meanwhile population has increased by approximately 20 per cent., so that taking the area as a whole the acreage of open spaces has grown faster than the population, having risen from 137 to 168 acres per 100,000 inhabitants.

The greatest increase of acreage, both absolutely and in proportion to population, has been in the middle ring, which comprises the outer group of Metropolitan Boroughs. Here there has been an increase of 1,905 acres, and the ratio to population has risen from 147 to 185 acres per 100,000 inhabitants. In the more congested and fully built-up districts near the centre of London the open spaces show only the meagre increase of 122 acres in forty years. In the outermost ring (i.e. the boroughs beyond the County boundary), open spaces have increased in forty years by about 1,000 acres, but this rate of increase has not nearly kept pace with the growth of population, so that the *per capita* acreage here shows a decrease from 241 to 194 per 100,000 of population.

Table IV (pp. 306–7), where the open spaces are classified according to their size, shows that by far the greater number of open spaces are comparatively small: over two-thirds of the total number (371 out of 536) being less than five acres in extent. As might be expected,

this is especially true of the inner and more congested districts, where a large number of these spaces are squares, or small disused burial grounds, laid out as recreation grounds and thrown open to the public. No less than 105 of the 173 open spaces in the inner ring cover an area of less than one acre, and the number of these small spaces has trebled in the last forty years. How tiny some of them are may be seen from the fact that their aggregate extent is only 47 acres. In this inner ring the number of spaces of less than 5 acres has grown from 65 to 151, and their acreage from 71 to 127, while the larger open spaces have only increased from 19 to 22, and their acreage from 1,281 to 1,347.

In the area outside the County the main increase both of number and of acreage has been in the middle category (i.e. spaces of from 5 to 100 acres) which includes all but the largest parks. Here the total number of the smaller spaces (i.e. under 5 acres) has only grown from 23 to 41, and their acreage from 35 to 60, while the larger open spaces have increased in number from 14 to 57 and in acreage from 1,372 to 2,363. The development of open spaces in the middle ring (i.e. the outer Metropolitan Boroughs) has followed a midway course. Here the spaces under 5 acres in extent have increased from 75 to 179 in number and from 76 to 192 in acreage, while those over this limit of size have grown from 49 to 86 in number and from 3,749 to 5,538 acres in extent.

Practically the whole of the increase of open spaces in and near London since 1890 has been among those managed by the London County Council and the various Borough Councils. The great contribution of the City Corporation towards providing lungs for Londoners, through the acquisition of Epping Forest, had already been made before the date of Charles Booth's enquiry,[1] and most of this splendid forest lies outside the present Survey Area. Moreover most of the Royal Parks within the Survey Area had already been fixed in extent

[1] Minor additions to the area have however been made from time to time.

before the year from which our comparisons start. Of the total increase of 3,043 acres in forty years the L.C.C. are responsible for 1,707 and the Borough Councils for 1,201 acres. As is to be expected, the Borough Councils are mainly concerned with the smaller spaces within the administrative County, though outside those limits they are responsible for nearly the whole of the increase.

From all the above figures it appears that in the London Survey Area as a whole the provision per head of the population has improved by about one-fifth since the time of the Booth inquiry. In the administrative County taken by itself the rate of improvement has been considerably greater, the *per capita* provision of open spaces having risen by nearly one-third. On the other hand the process of urbanisation of the outer ring, which has more than doubled its population during the forty year period, has not been accompanied by a proportionate increase in the provision of open spaces, and the *per capita* acreage has declined by more than a fifth.

In order however to obtain a just view of the adequacy or otherwise of the supply of open spaces in different parts of London it is not sufficient to confine attention to the figures showing their percentage growth or decline. In some of the central parts of London there is, and for many years has been, a lamentable deficiency of open spaces. The figures in Table III show that in the inner ring as a whole there are now only 107 acres of open space per 100,000 inhabitants compared with 185 in the outer ring. But these figures by no means bring out the real acuteness of the shortage in the central areas. For the inner ring includes Battersea and Westminster, which with less than a third of the population of the ring contain nearly three quarters of its open spaces. If these two relatively favoured districts be excluded, the deplorable result is arrived at that the whole of the remaining central areas, with a population of nearly a million, have only 400 acres of open space. The worst provided of all the London boroughs is

Shoreditch with less than 9 acres per 100,000 inhabitants, but it is closely followed by Southwark (12), Islington[1] (14), and Finsbury (18).

In these congested and built-up areas it is of course not reasonably possible to make good the shortage by opening new parks and gardens within the areas themselves, and though there is room for improvement in the use of the scanty spaces which are or might be made available in some of the central districts, the best hope is to make provision outside their limits, but accessible to their inhabitants.

In addition to the open spaces included in the statistical tables, London contains a large number of squares, or enclosed spaces generally accessible only to the inhabitants of surrounding houses. Altogether 346[2] such squares and enclosures were enumerated by the recent Royal Commission on London Squares, covering an aggregate area of 324 acres. As has already been pointed out such squares, though enclosed, are very valuable from the point of view of air space and of general amenities, and it is now generally recognised that the public have a strong interest in their preservation. The main concern of Londoners in respect of enclosed squares is to ensure, first that they shall remain unbuilt on, secondly that they shall be properly kept up and their beauties visible to the public, thirdly that no opportunity should be lost of making a square accessible to the public for quiet rest and enjoyment. In inner London there is of course no chance of increasing the number of squares. In some of the outskirts however it has become a recognised feature of the laying out of many housing estates to retain a certain amount of land as an open space for the residents, and at least one borough maintains a playing-field purely for the purpose of letting it for games.

[1] In the Southern and more Central part of Islington the situation is far worse than even the above figures show, and probably approximates to that of Shoreditch.

[2] After deducting 122 squares maintained by public authorities as open spaces.

The use of Parks and Open Spaces for Recreation.—Concurrent with the increased provision of open spaces, there has been a very large increase in the use made of them for purposes of both restful and active recreation, partly on account of the greater amount of leisure at the disposal of the working population, and more especially since 1916 as a result of "Summer Time."

Every park and open space affords some facilities for restful enjoyment, and many are prevented by the limit of their size from providing any other form of recreation. Any statistical measurement showing increase of users of open spaces for the purpose of restful recreation is of course impossible. The proof of increased use and need and of improved provision of facilities can only be based on the personal experience of those who have known and used the parks throughout the survey period. For instance, the park keeper at a well-known L.C.C. park attributed the greatly increased use of parks for this purpose, largely to the increased noise and volume of traffic. This problem had not at the beginning of the period assumed the importance which it has reached to-day.

On comparing existing conditions with those which prevailed forty years ago it is noticeable that in the smaller open gardens, which are typical of the central London area, more attention has been paid in recent years to up-keep, to the provision of seats and to the care of the flower-beds. In the larger parks the flower-beds are on the whole more numerous and better cared for than forty years ago, though in some of the parks in the inner London area the general amenities have certainly suffered from the increased attention paid to athletics. The construction of ornamental gardens, rockeries, aviaries, etc., have all added to the attractiveness of the parks, while consideration for physical comfort is shown in the more adequate provision of refreshment kiosks and conveniences, as well as more numerous seats.

At the time of the Booth Survey the L.C.C. had only just acquired the authority to spend money on the

provision of music in any of the places under its control, although permission had previously been granted to the National Sunday League to give gratuitous performances in four of the Council's parks. There are now 52 L.C.C. parks scheduled as giving band performances, in addition to the Royal Parks, and several others, especially outside the county, belonging to the local authorities.

Band concerts are not the only form of entertainment in the parks. During the years directly following the war, an appreciable proportion of these performances were accompanied by dances, though recently the popularity of this form of recreation seems to have declined. Pierrot concerts and mechanical performances of music have also achieved some popularity.

The outstanding feature however of the last twenty years has been the growth of demand for outdoor sports and active physical exercise, and the result has been that while the general amenities of open spaces have by no means been neglected, the main pre-occupation of the park authorities in recent years has been to provide more and more playing-grounds, and so to organise and economise their use as to afford the maximum possible facilities for active recreation. Under this heading are included not only organised games, but a large number of other forms of outdoor pastimes and exercise. For children sandpits, gymnasia, paddling pools and the like have been provided in ever growing number, while for youths and adults the facilities for bathing, boating, gymnastics, running and cycling have been continually increased and improved. But undoubtedly the chief advance has been made in the provision for such generally popular team games as cricket and football, and for lawn tennis, though a large variety of other sports of less general appeal, e.g. hockey, bowls, golf-putting and net ball have not been neglected.

The categories of games and sports for which the London parks provide have not greatly altered during

the past forty years, but there has been an enormous increase in the demand for these facilities, coupled with a great, though far from equivalent, expansion of the supply, while considerable changes have taken place in the relative popularity of different kinds of sport. There are no comprehensive statistics showing these developments for all kinds of sports in all the London open spaces during the whole of the period of forty years. The following table (p. 281) however though limited to the L.C.C. parks and to the latter half of the period shows clearly the development which has taken place in respect of four of the principal classes of organised games, viz. cricket, football, lawn tennis and hockey.[1]

Of course these games are also played in other open spaces, e.g. to a limited but growing extent in the Royal Parks, and also in the parks and playing-fields controlled by local authorities outside the county area. The London County Council however is by far the most important public authority in the Survey Area so far as concerns the provision of playing facilities for persons of limited means, and the figures given opposite may be accepted as affording a fair picture of what has been taking place over the whole area.[2]

It will be seen that with the notable exception of lawn tennis there has been no considerable increase in the number of "pitches" provided. The number of cricket pitches has in fact actually decreased as compared both with 1905 and 1912. The decline is only partly accounted for by the omission of pitches for juveniles in the post war figures, but the great increase in the numbers both of applicants and of games played proves that it is not attributable to any falling off in demand. The main cause appears to be the policy of converting a large number of former cricket pitches on Hackney Marshes into football grounds.[3] To

[1] Bowls are excluded as the statistics are not on a comparable basis.

[2] The last year for which accurate figures are available is 1926.

[3] The number of cricket pitches on Hackney Marshes in 1905 was 100, and is now only 53.

some slight extent the decrease has been made good since 1926 by an increase in the number of pitches in other open spaces, but the total number of pitches (other than juvenile pitches) in 1929 was still 42 below the total for 1912. This decline in face of the greatly increased pressure of demand is a clear mark of the shortage of public playing-fields in London.

TABLE I

GAMES IN OPEN SPACES—(L.C.C. PARKS ONLY).

	1905.			1912.			1926.
	Players over 14.	Juveniles.	Total.	Players over 14.	Juveniles.	Total.	Players over 14.[1]
CRICKET:							
Number of Pitches	373	78	451	391	87	478	320[1]
Number of Applicants[2]	—	—	600	—	—	991	1,048
Number of Games Played	—	—	22,379	—	—	19,376[3]	31,625
Number of Games Played per pitch	—	—	50	—	—	41[3]	99
FOOTBALL:							
Number of Pitches	209	25	234	259	52	311	270[1]
Number of Applicants[2]	—	—	436	—	—	616	911
Number of Games Played	—	—	16,595	—	—	13,331	36,120
Number of Games Played per pitch	—	—	71	—	—	43	130
HOCKEY:							
Number of Pitches		34			46		27
Number of Games Played		1,755			1,983		1,113
Number of Games Played per pitch		51			43		42
LAWN TENNIS:							
Number of Courts		450			504		781
Number of Games Played		70,096			126,147		274,596
Number of Games Played per court		155			250		350

[1] Pitches and games for juveniles were not recorded in this year.

[2] "Applicants" means the number of registered clubs applying for grounds on Saturday afternoons.

[3] This small figure for cricket is accounted for by an exceptionally wet August. The figures for games played in 1911 were 24,728 and in 1913, 23,182.

That fuller use is being made of such cricket pitches as are available is indicated by the fact that the number of games played per pitch doubled between 1905 and 1926, and though no doubt a certain part of this increase is due to the inclusion of Sunday games since 1922 this change would not in itself be nearly sufficient to account for the whole rise.

An even more striking indication of the shortage is afforded by the statistics of the number of applicant teams in comparison with the number of pitches to be allotted. In 1905, 600 teams applied for 451 cricket pitches on Saturday afternoons. Reckoning two teams per pitch, this would indicate a substantial surplus of pitches, though doubtless there were many cases of local shortage, for the whole of the London pitches can hardly be regarded as a single "pool" equally available for all clubs throughout the county area. In 1926 the position was completely reversed, there being 1,048 applicant teams for 320 pitches.[1] Even if the whole accommodation in the county were treated as a single "pool" this would mean that a large number of teams must have failed to obtain the desired number of games.

The statistics of football grounds show similar features; though in 1926 the number of grounds available was somewhat greater than in 1905 it was less than in 1912, in spite of the transfer of grounds on Hackney Marshes, while the number of games played on each ground has nearly doubled since 1905, and the number of applicants has increased in a much greater ratio. The result is that while theoretically there were sufficient grounds in the L.C.C. parks taken together to satisfy all applications in 1905, they only sufficed to supply three-fifths of the pitches applied for in 1926.

Hockey appears to be of minor and declining importance in the London parks, whether judged by the number of grounds, or of games played.

In striking contrast has been the enormous growth of lawn tennis between 1905 and 1926. The number

[1]The post-war figures apply to players over 14 only.

of games played has nearly quadrupled, and the number played on each court has more than doubled. Of course a game of lawn tennis provides exercise for a much smaller number of players than cricket, football or hockey, but even allowing for this difference the aggregate of 274,000 games in a year is very remarkable. Fortunately a tennis court occupies a much smaller area than a cricket pitch, and the courts provided have increased from 450 to 781 between 1905 and 1926, a large proportion of the new provision being hard courts available for play throughout the year.

The statistics do not enable Sunday games to be separated from the rest, so that it is not possible to say how far the adoption of a more liberal policy in 1922 contributed to the recorded increase of games played. There is, however, no possible doubt that the facilities now available on Sunday are being largely and beneficially used.

The Park Authorities, especially the London County Council, have evidently made strenuous efforts to keep pace with the increased requirements of the London population for playing-fields, and if there is still a large unsatisfied demand this is due to the physical and economic impossibility of securing sufficient open space within the Survey Area of a kind suitable for organised games. The local authorities just outside the county area have also been active, though their charges for the use of pitches are as a rule much higher than those of the London County Council, except perhaps for lawn tennis courts.

The charges made by the London County Council are generally speaking fixed very low, so as just to cover necessary expenditure on maintenance. The figures for 1928–9 show that the total income in respect of cricket pitches averaged only about one shilling, and in respect of football grounds about eighteen pence, per game played. To a cricket or football club of poor members the cost of travelling to and from the ground is a far greater deterrent than any L.C.C. charge. The charge

for lawn tennis courts (1*s.* 6*d.* per hour) is relatively higher.

In addition to the 9,627 acres of public open spaces within the London Survey Area there are private playing-fields to the extent of 3,671 acres, giving a total of 13,284 acres, of which of course only a part is suitable for the playing of games.

If it were essential that the population of the Survey Area should find their means of recreation within its limits the problem of supply would be insoluble. The National Playing Fields Association has devised a formula for the purpose of arriving at an ideal standard of adequate provision of open spaces in relation to population. The basis of the calculation is somewhat speculative, and the details need not concern us, but the fact that the formula would require between three and four times as great an area of open space, public and private, as is actually provided in the London Survey Area is at least suggestive of the existing shortage. When it is remembered that only 5,005 acres of land remain within the whole Survey Area which are both undeveloped and physically suitable for playing-fields,[1] it will be seen how hopeless it is to expect to overtake the demand by any increase of provision within the Survey Area itself.

Fortunately we are not limited to the area in which the population live, since the great increase of travel facilities described in another chapter makes it possible for a large proportion of Londoners to seek their recreation outside. The question how far the unsatisfied needs of Londoners in respect of open spaces can be met by travel to or beyond the outskirts of Greater London is one which can only be touched on briefly in this Chapter, as it involves considerations of cost, time and fatigue, which vary in their incidence according to the means of the person concerned and the distance from the centre at which he resides. A rough calculation of the public open spaces outside the Survey Area which are reasonably accessible to the mass of the

[1] See L.C.C. Papers, No. 2652, pp. 5–6.

population of London by omnibus, tramway or train (e.g. such spaces as Epping and Hainault Forests, Richmond Park, Wimbledon and Epsom Common), shows that approximately 16,000 acres can be considered as an addition to the open spaces accessible to the population of the London Area. Of course for the minority whose means allow of the use of cars or motor-cycles or who utilise the rapidly growing services of motor coaches, the area of open space accessible is very much greater, but the above estimate assumes that only the ordinary public means of travel are available.

It is moreover to be borne in mind that the outer parts of Greater London have now a large and increasing population of their own, whose requirements, as well as those of London, have to be met by the open spaces referred to above. The undeveloped land in the area contained in a circle of ten-mile radius from Charing Cross is said to be about 64,000 acres, of which however only about 28,000 are suitable for playing-fields. At the best, only a fraction of this area could possibly be obtainable for open spaces, since in the past three years the area built over has increased at the rate of 2,500 acres a year, and in view of the housing shortage this increase is likely to continue, though probably not at the same rate.

On the other hand it is to be remembered that London is much better off for open spaces than many large cities, and it has been shown that during the past forty years there has been a growth not only of the total acreage of such spaces but of the proportion which it bears to population. The central part of the area, where the density of population and the need of open spaces is greatest, is governed by an active and vigilant public authority, which has shown itself fully alive to the necessities of the case, and eager to do all in its power to supply those needs. If, as appears, there has been a progressively acute shortage of accommodation for active games, this has been because the public sentiment in favour of outdoor sports has outrun the practical possi-

bilities of supply. No doubt this remarkable growth of public opinion received a great impetus from the experience of the war, with its demonstration of the dangers of urban life and overcrowding in relation to physique.

It should however never be forgotten that the young and vigorous are not the only section of the population who need open spaces and their demands ought not to monopolise attention. No less beneficial than playing-fields are the means afforded by open spaces, and particularly by the smaller gardens and open squares, for rest and quiet enjoyment for the older and less vigorous, and for the play of the younger children. Such refuges are more and more urgently required in view of the increasing noise and danger of the London streets, and the orderly beauty of the park and garden is itself an inestimable boon, as a refreshment to weary eyes and a solace to jaded nerves, racked by the war or strained by the rush and hustle of modern city life.

II. Public Libraries and Museums

The Public Libraries of London may be regarded, according to the point of view, either as organs of education or as means of recreation. If, in view of the fact that they circulate eighteen volumes of fiction for every five of general literature, they are more appropriately dealt with in the present chapter than in that which treats of London Education, it must be recognised that strenuous efforts are being made by some of the librarians and library authorities to strengthen and develop their cultural influence. In any case there can be no doubt that the growth of public libraries has greatly improved the amenities of London, and has made a most valuable contribution towards widening the horizon and enriching the lives of a great multitude of its inhabitants.

Those who really care for good literature have always been a small minority, but the facts that there are now over 660,000 borrowers from public libraries in the London Survey Area, compared with less than a quarter

of that number thirty years ago, and that each of them borrows on the average twenty-nine volumes in the year, must in the aggregate imply an immense advance both in self-cultivation and in the rational enjoyment of leisure.

If, as Canon Barnett always held, the saddest feature of poverty is not physical privation but the narrowing of interests and stunting of mental and spiritual growth which too often result from the hard struggle for the means of existence, then the development of an organisation which brings freely to all the possibility of establishing contact with the best thought of the world must be looked on as a most significant factor in any survey of the life and labour of the people, even though only a minority of those to whom the offer is made avail themselves of it, and still fewer use it as yet to the best advantage.

The Tables on pp. 311–3 give an approximate measure of the growth of public libraries in London and the use that has been made of them, during the thirty year period 1898 to 1928. It is true that the figures only relate to public (i.e. rate-supported) libraries, but for the mass of persons of limited incomes these represent the main, sometimes the only, means of access to books. The wealthier section of Londoners who live in Charles Booth's "yellow" streets, are of course much less dependent on public libraries. But in most parts of the London area the number of those who can afford to purchase all the books they need, or to obtain them through subscription libraries are but a small minority. Nor is the general effect of the statistics appreciably disturbed by the fact that in a few boroughs libraries supported by voluntary subscriptions or endowments formerly provided some of the amenities now supplied by rate-supported libraries.

The effect of the Tables is to show that for every thousand of the population the number of borrowers of books from public libraries in the London Survey Area has risen from 31 to 115, and the total number of books

borrowed from 899 to 3,335 in the last thirty years. During the same period the number of public libraries in the area has increased from 58 to 121.

It is interesting to note that the pace of reading, as measured by the average number of books annually issued to each borrower, has remained constant at 29. Of these 29 volumes nearly two-thirds have throughout the period been works of fiction. The greatest proportionate increase however has been in juvenile books, the issues of which in 1928 were more than five times as great as in 1898.

Within the Survey Area the stock of books for home reading quadrupled in thirty years, and the rate of increase of the stock of reference books was nearly as high. The result is that on an average each public library in London, which in 1898 had 9,000 books for borrowing and 2,000 for reference, now has 19,000 books for borrowing and 5,000 for reference. Concurrently with this expansion there have been great improvements in all branches of library organisation—better cataloguing, provision of open access, juvenile rooms, better arrangements for study and reference, and systematic efforts by means of lectures and discussions to make the library an intellectual centre for the borough. Schemes are on foot for increasing the power and range of the influence of local libraries by means of a co-ordinated catalogue and a central library for students. Responsibility for the catalogue scheme has been taken by the Carnegie Fund Trustees who have done very much to encourage the expansion and right use of libraries in London, following in this matter the example set in earlier years by Mr. Passmore Edwards, whose liberality had given a most valuable stimulus to the building of London libraries.

A careful examination of the Tables on pp. 311–3 reveals that the progress of public libraries in the last thirty years may be divided into three stages: (1) the pre-war period 1898–1913, when the principal advance was in the number of public libraries, which doubled in fifteen

years (from 58 to 117). Meanwhile the number of volumes issued and the proportion of borrowers to population only increased *pari passu* with the number of libraries, showing that on the average there was no marked development of the activities of individual libraries. (2) The next period, i.e. the five years of war, was necessarily one of stagnation. (3) The post-war period has seen very few new libraries established but an immense increase in the scale and range of activity of individual libraries. The total number of libraries in the Survey Area is now only five greater than in 1919, but the number of borrowers and of books issued to them have both nearly doubled in nine years. It follows that each library must now, on an average, be doing nearly twice the amount of work that it was performing nine years ago, and doing it on a relatively narrower basis of stocks of books, since these have only been increased by about 50 per cent. while the issues have nearly doubled.

The marked difference in the character of advance in pre-war and post-war times is not difficult to explain. Up to 1919 the expenditure of local authorities on public libraries was limited by law to the proceeds of a penny rate, except in certain cases in which this limit had been modified by special Acts. This restriction, however justifiable it may have been at the time when it was imposed, undoubtedly hampered the efforts of the library authorities to meet the growing demands of readers, especially in the poorer districts in which the need of public libraries was greatest and the proceeds of a penny rate the lowest. The only possible development while this state of things lasted was by way of multiplying libraries, and such multiplication was stimulated by the liberality of the Carnegie Trustees. In 1919 however the limitation of the rating powers was swept away, and libraries were for the first time free to expand according to needs, subject only to the limits of the good-will and financial resources of the borough councils. As by this time all but a very few councils

had established public libraries, the predominant characteristics of the post-war period have naturally been internal development, and efforts at co-ordination.

There is no reason to think that the limit of beneficial development has yet been nearly reached. Though on the whole the figures show that the greatest progress has been made by the poorer districts, the average number of borrowers in proportion to population in these districts is still below the average for the whole Survey Area. It is probable that something more positive than the mere removal of rating disabilities may be necessary to enable and to induce the poorer parts of London, where rates are usually high, to develop their library systems to the fullest possible advantage.

Only a passing mention can be made of Museums and Art Galleries, which in some respects are akin to public libraries in their cultural influence. Our splendid National Museums and Galleries, though situated in London, are not local in character, and the statistics of their visitors, drawn from all parts of the country and from oversea, afford no safe indication of the growth of London amenities. On the other hand, the presence of these great institutions in the midst of London, has checked any tendency to develop a general system of local museums and galleries throughout the various boroughs, comparable with the network of public libraries.

III. Places of Indoor Entertainment

As regards places of indoor entertainment in London the outstanding feature of the past twenty years has been the rise of the moving-picture palace, which has become the most important means of providing amusement, if not instruction, for the leisure hours of Londoners. As a result of its growth there are to-day between three and four times as many places of entertainment in London as at the time when Charles Booth began his survey. Their seating capacity has increased in about the same proportion, but if account be taken of the greater number

of performances per day of which the "cinema" is capable, the total number of persons for whom entertainment is provided must have risen much more.

The only classes of entertainments the growth of which can be statistically traced since the time of the Booth survey are those which are licensed by the London County Council, and the Lord Chamberlain, and of these the only categories for which the figures are really comparable are theatres, music halls and cinemas. A certain amount of information has been obtained as to these places of entertainment in the parts of the Survey Area outside the county boundary, but they only relate to the year 1929. Consequently the following comparative figures relate solely to the County of London, and to the years 1891, 1901, 1911, 1921 and 1929.[1] The figures of accommodation for pre-war years have been compiled from published data: those for 1929 have been specially supplied by the courtesy of the London County Council.

TABLE II

NUMBER AND SEATING ACCOMMODATION OF THEATRES, MUSIC HALLS AND CINEMAS IN THE ADMINISTRATIVE COUNTY OF LONDON, FOR CERTAIN YEARS.

Type of Place of Entertainment.	1891.		1901.	1911.		1921.	1929.	
	No.	Seating Accommodation.	No.	No.	Seating Accommodation.	No.	No.	Seating Accommodation.
Theatre . .	49	65,550	59	54	67,187	48	87	127,000
Music Hall	42	50,000	42	50	73,670	46		
Cinema . .	—	—	—	94	55,149	266	257	268,000
Total .	91	115,550	101	198	196,006	360	344	395,000

At the time of the Booth Survey, theatres and music halls were the main types of entertainment in London. There were in 1891, 49 theatres and 42 music halls with seating accommodation of 65,550 and 50,000 respectively. When it is realised that of this number,

[1] The figures for seating accommodation in 1901 and 1921 are lacking.

30 theatres and 10 music halls were in the two boroughs of Westminster and Marylebone and that travel facilities were far from being what they are to-day, it will be seen that in the main the remaining 27 boroughs had to be content with only 19 theatres and 32 music halls among them. As far as catering for the tastes of the majority of the population was concerned the music halls were the most important. The "straight" theatre has always appealed to a limited and more educated or intelligent public. Its prices have always been higher than those of the music hall. Nevertheless during the period 1891 to 1901 the theatre gained on the music hall, the number of theatres increasing from 49 to 59, while that of music halls remained stationary.

At this time the old-fashioned music hall of rather doubtful reputation was falling below the level of popular taste, but in the following decade (1901 to 1911) the London music halls greatly improved their entertainments and regained much of their popularity, their number being increased by eight. Meanwhile theatres declined by five, some of those discontinued being transformed into music halls.

In the whole twenty years 1891 to 1911 the seating accommodation of London theatres only increased by $2\frac{1}{2}$ per cent. while that of music halls rose by nearly one-half. Not only did their number increase but also their average size, as a result of the building of new halls and the extinction of many of the smaller and old-fashioned ones. The latter were sometimes converted into "electric theatres" or picture palaces, a new form of entertainment rapidly rising in popularity towards the end of the period and destined to bring the temporary revival of the music hall to a speedy end.

Although references to the invention of the "bioscope" are found in London County Council reports as early as 1905, it was not until some years later that the "Cinema" made itself felt as a force in the entertaining world. By 1911 however there were already 94 cinemas in the County of London, with an aggregate seating accom-

modation of 55,000, i.e. over three-quarters of that of the music halls. The early cinemas were relatively small, the average accommodation being about 600 seats, but with their lower costs and prices they soon became a serious challenge to the older form of entertainment. In the next ten years the number of cinemas increased from 94 to 266, while the theatres and music halls declined from 104 to 94.

The latest figures for 1929 show that the theatres and music halls have further fallen in number to 87, and their combined seating accommodation is now only 127,000 compared with 140,800 in 1911, and 115,500 in 1891.

In the past eight years (1921–29) there has been no increase in the total number of cinemas, but the present seating accommodation (268,000) shows that the average size of the halls has increased greatly in the last twenty years. There is no question that the cinema is at present the most popular form of London entertainment, and one by one several of the great theatres and music halls have been converted into "picture palaces." At the time of writing (1930) the problem of combining speech with moving pictures may be said to have been technically solved, but it is not yet possible to forecast the influence of the "talkies" on the future popularity of the "movies."

The wide popular appeal of the cinema is of course largely due to the low level of admission prices. The application of "mass-production" and mechanical methods to dramatic art enables a much cheaper, if inferior, article to be put upon the market. How low is the average price of the cheapest seats as compared with the theatre gallery is shown in another chapter.[1] The cinema, whether silent or talking, may be but a poor substitute for good acting, but it enables thousands of persons who could never have afforded theatre prices to spend an enjoyable evening, and it is probably a more formidable competitor with the public-house and the streets than with the "legitimate" drama.

[1] See p. 100.

The extent to which the cinema now fills a gap in the lives of the poorer classes is shown by the statistics of six typical "working-class" boroughs [1] with a population of about a million. In 1891 this huge area had within it only 18 theatres and music halls, or one such place of entertainment to 58,000 inhabitants. In 1929 the total number of cinemas was 59, together with five theatres and music halls, i.e. one place of entertainment for 14,000 inhabitants, more than nine-tenths of this provision consisting of picture palaces. For the working-class areas outside the county it is impossible to give comparative figures, but the statistics furnished for 1929 show that in five such areas [2] with a population of approximately 755,000 there were 43 cinemas to 6 music halls and 3 theatres, showing the overwhelming predominance of the cinema as the workman's theatre.

Of course it must not be assumed that London workpeople are now limited to places of entertainment within their immediate neighbourhood, for the improved means of locomotion now enable them to travel to and from theatre-land with much greater speed and comfort than in Charles Booth's time. Still the cost and fatigue of transport are considerable, and on the whole it is probable that, for the mass of the inhabitants of the areas referred to above, the local cinemas are practically the only form of indoor entertainment that is readily and continuously available, varied by an occasional boxing display, concert, or some kind of "pleasant evening" organised by a local church or other cultural agency.

It is evident therefore that the question how the London workman's extra hour of leisure is spent,[3] is partially answered by the immense growth of the cinema. This is not the place to discuss in detail the good and bad influence of these entertainments, or the problem of their future improvement, but the figures already set

[1] Stepney, Shoreditch, Bethnal Green, Poplar, Southwark and Bermondsey. Population in 1891, 1,041,000; in 1921, 932,000.

[2] West Ham, East Ham, Walthamstow, Leyton and Barking.

[3] See p. 118.

out give some measure of the importance of these questions in relation to the life of the people of London.

There is no doubt that the technical quality of film performances has vastly improved, but the cultural and artistic value of the majority of them leaves much to be desired, while the prominence of the sensational element and so-called "sex appeal" are unhealthy features. Still, the picture palace can be more fairly judged as a new agency, filling a place in the people's life which was previously void, than by comparison with the theatre or other more elaborate forms of entertainment which have throughout been beyond the means of the average wage earner, except as a very occasional luxury. That an effective counter-attraction to the public-house and the streets should have been found in the picture palace is of itself no small gain. It is however impossible to rest content with the present standard of achievement, and it is to be hoped that the new invention of the "talkie" will not divert attention from the urgent necessity of improving the quality of the cinema film, as a branch of dramatic art and a means of healthy and rational amusement.

IV. Other Means of Recreation

Besides the forms of out-door sport and active recreation which have already been referred to, there are of course others which are not mainly carried on in parks and open spaces, e.g. swimming, rowing, rambling and cycling.

In addition to the 15 open-air swimming pools in the London County Council parks, there were in 1928 no less than 103 public swimming baths[1] in the County of London, compared with 85 in 1898. The number of bathers in these baths increased in thirty years from 2,115,000 to 5,118,000, the greatest proportionate rise being in the number of women and girls who increased from 212,000 to 1,847,000. Roughly speaking, the number of bathers per swimming-bath has doubled in

[1] Including in many cases several baths in the same building.

thirty years, and there is no doubt that a large part of this increased use is due to the encouragement of swimming by the schools.

There are no available statistics showing the growth and vicissitudes of the other modes of exercise. It is, however, well known that about the year 1895 there was a sudden burst of popularity of the bicycle, probably connected with the changes of construction and the invention of the pneumatic tyre, which for the first time made bicycling an attractive pursuit for women. For the next few years the London parks were invaded by crowds of eager learners drawn from all ranks of society, and the roads into the country were black with cyclists on Sundays and holidays. The general popularity of cycling as a form of recreation soon began to wane, and the decline was hastened by the advent of the motor-car and motor-cycle which largely destroyed the enjoyment and increased the danger of pedal cycling on public highways.

The decline of pedal cycling for all but utilitarian purposes was followed by a rapid but ephemeral development of the popular taste for roller-skating. Up to the year 1905 there were only five roller skating rinks in the County of London. By 1910 they had grown to twenty-three. Ten years later the number had declined to four, and the present number is three.

As roller-skating went out dancing came in. In Charles Booth's time public dancing was associated largely with saloons and public-houses, and was looked at askance by the "respectable." In the years immediately preceding the war however the invasion of American dances began, and the passion for this form of recreation was powerfully stimulated by the psychological and emotional conditions generated by the war. In the years immediately following the Armistice the popularity of dancing was at its height, and (as has already been mentioned) public dancing was a frequent accompaniment of music in the London parks.

In still more recent years the taste for dancing

seems to have waned, and one or two of the dancing halls have been converted into ice-rinks, but this newest form of active recreation has hardly touched the working-classes.

Thus the fashions in forms of exercise ebb and flow, while, through all the vicissitudes, the old established British forms of sport, such as cricket, football and lawn tennis, have maintained their attractiveness.

Among the "inactive" forms of outdoor recreation in London an important place must be given to the great gatherings which assemble to watch football matches in the winter months. The chief centres of attraction are Highbury, White Hart Lane, and Stamford Bridge for Association Football, and Twickenham on the occasion of an international Rugby match. The crowd at the Final Cup Tie has frequently numbered 100,000, but the figures show no marked tendency to increase, the total for 1929 having been lower than that in 1901.

Another form of "inactive" outdoor recreation which has recently reached the dimensions of a craze, but which now shows some signs of abating, is that of greyhound racing, which in the last three years has attracted large crowds, largely for the purpose of gambling. The total attendances at greyhound races in the London area rose from three millions in 1927 to 6½ millions in 1928, and nearly 8 millions in 1929, but the figures for the present year, 1930, will probably show a decline. Nearly half of the attendances are in July, August and September.

Another popular new source of entertainment is dirt-track racing, which finds its devotees in a rather different section of the community, and seems to be free from the taint of organised gambling.

The invention of wireless telephony and the organisation of "broad-casting" constitute one of the most important contributions that have been made since the time of the Booth Survey to the means available to the mass of the London population for rational indoor enjoyment. The whole development has taken

place since the War, the first regular programme of the British Broadcasting Corporation having been performed in 1922. Between 1923 and 1929 the number of wireless licenses issued in the London postal district rose from 201,000 to 541,000. The magnitude of this figure makes it certain that "wireless" has taken a firm hold on the working-class as well as the middle-class population of London, and its influence both cultural and recreational must in the aggregate be very great.

Though overshadowed of late by the phenomenal development of "wireless," the invention and gradual improvement of the gramophone have likewise been noteworthy features of recent years. Since Edison invented the phonograph in 1876, there has been a revolution in the mechanical means of performing music of which the end is not in sight.

The demand for both "wireless" and gramophones is in the main a new demand, created by the supply, and not in any great proportion deflected from other forms of musical performance.

V. The "Dis-amenities" of London

So far we have only dealt with the positive additions to the amenities of London and the means of recreation available to Londoners. Against these are to be set certain disquieting developments which have not yet been brought under control.

Traffic Danger. Foremost among these "dis-amenities" is the greatly increased danger to life and limb, arising out of the greater volume and speed of transport, together with the grave diminution of the possibility of quiet and restful enjoyment caused by the incessant and strident noise of street traffic.

It is not possible in this chapter to enter in detail into the difficult problem of London traffic dangers and noises, but the seriousness of the situation is sufficiently indicated by the figures given on p. 314. The statistics show conclusively that the danger to life and limb in London streets has immensely increased in recent years,

and that the increase began with the substitution of motor transport for horse-drawn vehicles in the decade 1901–11. In the twenty years 1881 to 1901 the number of persons killed through street accidents only rose from 127 to 186 per annum, an increase not very disproportionate to the growth of the population of Greater London. In the next decade (1901–11) however the number of deaths per annum rose from 186 to 426, of which nearly three quarters were due to the mechanically propelled vehicles, then coming into general use. Meanwhile the deaths due to horse-drawn vehicles fell from 175 to 116. By 1921 the number of killed had risen to 571, and in the eight years 1921–29 it increased to 1,362 of which only 37 were due to horse-drawn vehicles. During the same eight years the number injured through street accidents increased from 22,647 to 55,503.

Even if the increase of population be taken into account, these figures mean that the personal risk of being killed by street accident in London has more than doubled in eight years, while the risk of injury from the same cause has increased at a still greater rate.

Over two-thirds of the victims are pedestrians, mostly killed in trying to cross the roadway, the remainder being occupants or drivers of vehicles or cycles. About one in five of those killed are children under 15 years of age. Nearly four-fifths of the deaths are caused by private and commercial cars and motor cycles, less than a sixth by public conveyances (trams, omnibuses and cabs).

The local distribution of danger spots is well illustrated by a large scale map of the central parts of London recently published by the Ministry of Transport. It shows that the most dangerous localities as measured by the number of deaths by street accidents in proportion to the length of street in the seven years, 1921–7, were Charing Cross, Newington Butts and High Street, Camden Town.

The problem of checking the alarming increase of traffic danger shown by these figures is intimately bound up with the intricate and technical questions of traffic congestion and control. Though the problem is far from being solved it is at least satisfactory that the whole matter is the subject of continuous and vigilant care on the part of the London and Home Counties Traffic Advisory Committee, on whose recommendation many different ways of diminishing danger are being tried, and their operation systematically watched.

Street Noise and Vibration. Another unsolved problem is that of abating the nuisance and discomfort of street noise and vibration. Here the data even for a statement of the problem are wanting, for as yet there is no practicable method of measuring the volume of noise, or determining whether and if so how far and in what places it is increasing. A very baffling element in any attempted estimate of the discomfort due to noise is the adaptability of the human organism, which frequently makes it almost immune to accustomed sounds and only sensitive to those which are new and strange.

Atmospheric Pollution. Another very serious form of "dis-amenity" connected with the growth of a great city and the development of its industries is that of atmospheric pollution. Such pollution may be regarded from two different points of view: (1) in relation to general amenities and in particular to cleanliness, (2) in relation to public health. From the former point of view the most crucial question is the amount of solids suspended in the air or deposited therefrom, though gases which contain no solid matter in suspension may also be of importance in so far as they are evil smelling, or corrosive or noxious to vegetation. In relation however to public health, the most poisonous ingredients in the atmosphere may be colourless and inodorous gases such as carbon monoxide. The systematic observation of these more subtle elements in pollution has not been carried in London to a point which enables safe comparisons to be made over a period of years. In what follows there-

fore attention is limited to suspended solids, which are of course the main source of London grime and fog.

The only comparable long-period index of the changes which have taken place in the condition of the London atmosphere in respect of suspended solids is that which is afforded by the records of bright sunshine and of winter fog at various London observation centres. In the following tables, based on information furnished by the courtesy of the Director of the Meteorological Office, the observations have been averaged for quinquennial periods so as to eliminate so far as possible transient and accidental fluctuations. They show the mean duration of bright sunshine recorded over the whole year, and also in the three winter months (December to February), expressed as a percentage of the astronomically possible duration, together with the number of days in those three months on which fog was recorded at Greenwich, and on which visibility was low at Kew.

Average of Years.	Mean Percentage of Bright Sunshine.[1]		Winter Days.	
	Whole Year.	Winter.	Fog at Greenwich.	Visibility of less than 1,000 metres at 9 or 10 a.m. (Kew).
1891–1895 . .	30	13	26	—
1896–1900 . .	30	12	25	18
1901–1905 . .	29	11	20	19
1906–1910 . .	31	16	21	15
1911–1915 . .	30	12	17	16
1916–1920 . .	29	13	11	17
1921–1925 . .	30	13	8	21
1926–1929 . .	31	13	23	27

The sunshine figures show no progressive change, though those relating to the winter months only exhibit a curious increase in the years 1906–10. The Greenwich fog figures show marked improvement up to the period 1921–5, but a remarkable relapse in the quinquennium 1926–9. The rise from 8 to 23 is undoubtedly

[1] Mean of three stations, Westminster, Bunhill Row, and Kew.

explained in part by the adoption of a new standard, but the Kew figures of visibility seem to point to a real deterioration of atmospheric conditions in the last ten years.

From the year 1915–16 onwards[1] a more direct method of testing the solid content of the London air has been available through the observations conducted by the Committee on Atmospheric Pollution, which is now attached to the Department of Scientific and Industrial Research. It is unfortunate that the figures begin during the War period when precautions against smoke tended to be relaxed. With this caution the following figures may be given, based on data extracted from the annual reports of the above mentioned Committee.

The figures show in metric tons the amount of solid matter deposited per 100 square kilometres, on the basis of observations at eight London stations. For convenience they have been summarised in triennial periods.

Triennial Average. (Years ending March 31st.)	Total Solids (Metric Tons per 100 sq. Kilometres).	Percentage of Sulphates included.
1916—1918	15,548	17
1919—1921	13,352	14
1922—1924	11,378	11
1925—1927	11,536	13
1928—1930	11,023	12

Though the figures both of total solids and of the percentage of sulphur content show some decline as compared with the war period and the years immediately following, the degree of improvement since 1922 is somewhat disappointing, in view of the increasing use of gas and electricity for heating power and transport.

It is impossible to rest satisfied with a situation under which between 30 and 40,000 tons of soot and dirt are deposited every year on the surface of the County of London.[2] Moreover for the poorer classes of the London

[1] There are also figures for the latter part of 1914, but not for a complete year.

[2] The area of the County is about 300 square kilometres.

population the matter is made even worse by the fact that the incidence of the deposit is greatest in the central and most congested districts. Thus on an average of the last five years for which figures are recorded the mean rate of deposit of solids at the three central stations was over 11 cwt. per acre while at the five stations in the outer ring it was only 8 cwt. per acre. Grime is one of the worst foes to the amenities of urban life, but in the poorer districts it means not only acute discomfort for all, but also heavy and constant toil for the over-burdened house-wife. It is hardly possible to exaggerate the benefit to the whole standard of life of the people of London which would result from an abatement of the evil of London smoke and dirt.

Some of the worst of the toil and discomfort caused by the incessant need of cleaning and washing is alleviated by the provision of municipal wash-houses with facilities for the washing and drying of clothes. In the past thirty years the number of compartments in these wash-houses increased from 1,407 to 1,731,[1] and the number of users from 628,000 to 1,319,000. Though the number of users of wash-houses has thus more than doubled, it still only corresponds to a total of (say) 30,000 regular weekly users, which is but a small proportion of the families in London who are affected by the problem of washing-day in working-class tenements.

A number of local authorities in London also provide private baths, of which in 1927–8 there were 3,743, used by 5,802,000 bathers (of course not separate individuals). These figures compare with 2,539 baths used by 2,348,000 bathers in 1897–8, the most prominent feature being the great increase in the number of female bathers from 422,000 to 2,248,000. Of course these aggregate figures when spread over the year imply a much smaller number of regular bathers. Moreover the post-war figures both for baths and wash-houses show no tendency to expand.

Of efforts to cope with the evil of atmospheric pollu-

[1] County of London only.

tion by preventive means there has been no lack in recent years. The Smoke Abatement League has done much useful propagandist work, and a conference of Local Authorities (not confined to London) which met to consider the matter in 1912, was the starting point for the purely scientific observations of the Committee on Atmospheric Pollution. In 1926, Local Authorities were clothed with increased powers to deal with the smoke nuisance,[1] but the effect of this legislation can hardly yet be reflected in the statistics.

[1] By the Public Health (Smoke Abatement) Act, 1926.

CHAPTER IX: TABLES

TABLE III

OPEN SPACES[1] IN RELATION TO AREA AND POPULATION; 1891–1928.

	1891.	1901.	1911.	1921.	1928.
1. *Total Survey Area.*[2]					
Population (to nearest 1,000)	4,811,000	5,465,000	5,680,000	5,709,000	5,716,000
Population per acre	45	51	53	53	53
Acreage of Open Space	6,584	7,784	8,580	8,708	9,627
Acreage of Open Space as percentage of total	6·1	7·2	8·0	8·1	9·0
Acreage of Open Space per 10,000 population	13·7	14·2	15·1	15·2	16·8
2. *Inner Ring*[3] *of County of London.*					
Population	1,626,000	1,625,000	1,521,000	1,419,000	1,373,000
Population per acre	114	114	107	100	97
Acreage of Open Space	1,352	1,400	1,446	1,446	1,474
Acreage of Open Space as percentage of total	9·5	9·9	10·2	10·2	10·4
Acreage of Open Space per 10,000 population	8·3	8·6	9·5	10·2	10·7
3. *Outer Ring of County of London.*					
Population	2,602,000	2,911,000	3,001,000	3,065,000	3,096,000
Population per acre	43	48	49	50	51
Acreage of Open Space	3,825	4,599	5,021	5,084	5,730
Acreage of Open Space as percentage of total	6·3	7·5	8·3	8·4	9·4
Acreage of Open Space per 10,000 population	14·7	15·8	16·7	16·6	18·5
4. *Extra London Areas.*					
Population	583,000	929,000	1,158,000	1,225,000	1,247,000
Population per acre	18	29	36	38	39
Acreage of Open Space	1,407	1,785	2,113	2,178	2,423
Acreage of Open Space as percentage of total	4·4	5·5	6·6	6·8	7·6
Acreage of Open Space per 10,000 population	24·1	19·2	18·2	17·8	19·4

[1] Some of the areas given in the following tables differ from those published in *London Statistics*, since they exclude certain parts of the Royal parks to which the public have not free access (e.g. the Zoological and Botanical Gardens in Regent's Park, and the closed part of Woolwich Common).

[2] Including Penge.

[3] See p. 170.

TABLE IV

Open Spaces classified according to Size.

(*i*) *Acreage.*

Size.	Acreage of Open Space.				
	1891.	1901.	1911.	1921.	1928.
Total Survey Area.[1]					
Under 1 acre	39	66	81	86	94
1–5 acres . . .	143	209	236	256	285
5–100 „	1,753	2,429	2,917	3,042	3,542
100 and over „ . . .	4,649	5,080	5,346	5,324	5,706
Total acreage . . .	6,584	7,784	8,580	8,708	9,627
Inner Ring of County of London.					
Under 1 acre	18	33	42	42	47
1–5 acres . . .	53	66	76	76	80
5–100 „	451	471	498	498	517
100 and over „ . . .	830	830	830	830	830
Total acreage . . .	1,352	1,400	1,446	1,446	1,474
Outer Ring of County of London.					
Under 1 acre	17	28	33	38	40
1–5 acres . . .	59	109	123	139	152
5–100 „	1,048	1,330	1,591	1,655	1,904
100 and over „ . . .	2,701	3,132	3,274	3,252	3,634
Total acreage . . .	3,825	4,599	5,021	5,084	5,730
Extra London Areas.					
Under 1 acre	4	5	6	6	7
1–5 acres . . .	31	34	37	41	53
5–100 „	254	628	828	889	1,121
100 and over „ . . .	1,118	1,118	1,242	1,242	1,242
Total acreage . . .	1,407	1,785	2,113	2,178	2,423

[1] Including Penge.

TABLE IV—*continued.*

(*ii*) *Number.*

Size.	Number of Open Spaces.				
	1891.	1901.	1911.	1921.	1928.
Total Survey Area.[1]					
Under 1 acre	90	147	186	197	232
1–5 acres . . .	73	103	118	126	139
5–100 „ . .	60	87	109	114	139
100 and over „ . .	22	23	24	24	26
Total number . .	245	360	437	461	536
Inner Ring of County of London.					
Under 1 acre	36	66	87	89	105
1–5 acres . . .	29	38	45	45	46
5–100 „	15	17	16	16	18
100 and over „	4	4	4	4	4
Total number . .	84	125	152	154	173
Outer Ring of County of London.					
Under 1 acre	44	69	83	92	109
1–5 acres . . .	31	50	56	63	70
5–100 „	35	46	57	58	69
100 and over „	14	15	15	15	17
Total number . .	124	180	211	228	265
Extra London Areas.					
Under 1 acre	10	12	16	16	18
1–5 acres . . .	13	15	17	18	23
5–100 „	10	24	36	40	52
100 and over „	4	4	5	5	5
Total number . .	37	55	74	79	98

[1] Including Penge.

TABLE V

OPEN SPACES (IN ACRES) CLASSIFIED ACCORDING TO MAINTAINING AUTHORITIES.

Authority.	1891.	1901.	1911.	1921.	1928.
1. *Total Survey Area.*[1]					
H.M. Government . .	1,684	1,698	1,695	1,708	1,720
L.C.C.	2,974	3,657	4,064	4,060	4,681
City of London Corporation	917	918	918	918	918
Local Authorities . . .	509	967	1,321	1,430	1,710
Other Bodies	500	544	582	592	598
Total	6,584	7,784	8,579	8,708	9,627
2. *Inner Ring of County of London.*					
H.M. Government . .	682	683	683	683	683
L.C.C.	617	650	689	689	708
City of London Corporation	5	7	7	7	7
Local Authorities . . .	44	52	56	56	65
Other Bodies	4	8	11	11	11
Total	1,352	1,400	1,446	1,446	1,474
3. *Outer Ring of County of London.*					
H.M. Government . .	1,002	1,015	1,012	1,024	1,037
L.C.C.	2,233	2,884	3,252	3,248	3,834
City of London Corporation	—	—	—	—	—
Local Authorities . . .	94	202	258	313	360
Other Bodies	496	498	499	499	499
Total	3,825	4,599	5,021	5,084	5,730
4. *Extra London Areas.*					
H.M. Government . .	—	—	—	—	—
L.C.C.	123	123	123	123	139
City of London Corporation	912	911	911	911	911
Local Authorities . . .	372	713	1,067	1,061	1,285
Other Bodies	—	38	72	83	88
Total	1,407	1,785	2,113	2,178	2,423

[1] Including Penge.

TABLE VI.

ACREAGE OF OPEN SPACES CLASSIFIED BY LOCALITY.

Locality.	1891.			1928.		
	Population 000's.	Acreage of Open Spaces.		Population 000's.	Acreage of Open Spaces.	
		Total.	Ditto per 100,000 Pop.		Total.	Ditto per 100,000 Pop.
City of London	38	2	5	11	8	73
Battersea	150	403	269	164	404	246
Bermondsey	136	70	51	115	74	64
Bethnal Green	129	99	77	112	103	92
Camberwell	234	193	82	260	233	90
Chelsea	73	35	48	64	35	55
Deptford	102	14	14	112	33	29
Finsbury	110	2	2	72	13	18
Fulham	92	21	23	155	71	46
Greenwich	78	317	406	101	415	411
Hackney	200	233	116	217	621	286
Hammersmith	97	191	197	136	277	204
Hampstead	68	233	343	86	335	390
Holborn	67	10	15	39	10	26
Islington	319	34	11	325	46	14
Kensington	170	61	36	178	70	39
Lambeth	278	106	38	298	270	91
Lewisham	89	248	279	199	555	279
Paddington	136	73	54	145	101	69
Poplar	167	75	45	162	105	65
St. Marylebone	143	244	173	104	262	252
St. Pancras	235	321	137	206	490	238
Shoreditch	124	6	5	101	9	9
Southwark	202	4	2	181	21	12
Stepney	285	27	9	245	46	19
Stoke Newington	48	56	117	51	55	108
Wandsworth	156	1,167	748	347	1,292	372
Westminster	202	682	338	133	693	521
Woolwich	99	253	256	147	555	378
Total County of London	4,228	5,176	122	4,469	7,204	161

TABLE VI—*continued.*

ACREAGE OF OPEN SPACE CLASSIFIED BY LOCALITY.

Locality.	1891.			1928.		
	Population 000's.	Acreage of Open Space.		Population 000's.	Acreage of Open Space.	
		Total.	Ditto per 100,000 Pop.		Total.	Ditto per 100,000 Pop.
Barking	14	—	—	41	48	117
East Ham	33	124	376	146	225	154
West Ham	205	93	45	307	192	63
Leyton	63	255	405	130	366	281
Walthamstow	46	501	1,090	122	589	483
Penge	20	3	15	27	13	48
Acton	24	54	225	65	101	155
Hornsey	45	184	409	87	318	365
Tottenham	72	163	226	154	339	220
Willesden	61	30	49	168	234	139
Total Outer Areas	583	1,407	241	1,247	2,423	194
Total Survey Area	4,811	6,584	137	5,716	9,627	168

TABLE VII

Public Libraries in the Survey Area.

	Administrative County.			Outer Areas.			Total Survey Area.[4]		
	1898.	1913.	1928.	1898.	[3]1913.	1928.	1898.	[3]1913.	1928.
No. of Libraries . .	48	92	95	10	25	26	58	117	121
Stock of Books:[1]									
Home Reading .	472,000	1,203,000	1,847,000	77,000	262,000	478,000	549,000	1,465,000	2,325,000
Reference . . .	130,000	374,000	469,000	14,000	59,000	94,000	144,000	433,000	563,000
Issue of Books: [2]									
Fiction	2,534,000	4,815,000	9,203,000	608,000	1,116,000	2,901,000	3,142,000	5,931,000	12,105,000
Juvenile . . .	579,000	1,168,000	2,842,000	142,000	385,000	977,000	721,000	1,553,000	3,819,000
General . . .	710,000	1,771,000	2,467,000	144,000	355,000	777,000	854,000	2,126,000	3,244,000
Total Home Reading .	3,823,000	7,754,000	14,512,000	895,000	1,865,000	4,655,000	4,718,000	9,619,000	19,167,000
Reference . . .	621,000	916,000	2,433,000	—	—	—	—	—	—
No. of Borrowers [1] .	136,660	274,043	495,215	25,772	67,678	165,848	162,432	341,721	661,063
No. of Borrowers per 1,000 of Population	31	61	110	30	61	129	31	61	115
Issue of Books per borrower: [2]									
Fiction. . . .	18	17	19	24	17	17	19	17	18
Juvenile . . .	4	4	6	5	6	6	4	4	6
General . . .	5	6	5	6	5	5	5	6	5
Total Home Reading .	28	28	29	35	28	29	29	28	29

[1] The figures for the stock of books in Barking and the number of borrowers in Barking and Willesden in 1898 were estimated on the experience of other areas.

[2] In a few of the outer Areas the proportions of juvenile, fiction and general in the whole were estimated.

[3] Although there was a library in Acton in 1913, no official statistics are available for that year. This borough therefore is not included in the 1913 figures.

[4] Including Penge.

TABLE VIII

Public Libraries: Borrowers and Books Issued.

County of London Boroughs.	No. of Borrowers per 1,000 of Popn.		1898. No. of Books Issued per Borrower.[1]				1928. No. of Books Issued per Borrower.			
	1898.	1928.	Fiction.	Juvenile.	General.	Total.	Fiction.	Juvenile.	General.	Total.
Battersea	59	105	23	2	2	27	14	4	5	23
Bermondsey	33	99	18	8	4	30	15	7	3	25
Bethnal Green	—	104	—	—	—	—	18	9	5	32
Camberwell	51	101	13	7	7	27	16	7	3	26
Chelsea	70	111	16	5	6	27	19	4	7	30
Deptford	—	116	—	—	—	—	15	5	4	24
Finsbury	39	91	20	2	5	27	14	5	4	23
Fulham	51	127	16	3	4	23	14	6	3	23
Greenwich	—	98	—	—	—	—	19	5	3	27
Hackney	—	152	—	—	—	—	18	3	4	25
Hammersmith	54	86	24	5	6	35	26	6	4	36
Hampstead	53	216	19	3	4	26	16	2	7	25
Holborn	42	95	28	3	4	35	35	—	8	43
Islington	—	140	—	—	—	—	11	3	3	15
Kensington	37	67	19	4	8	31	16	5	4	25
Lambeth	69	93	21	4	7	32	26	6	5	37
Lewisham	31	117	21	2	5	28	26	8	8	42
Paddington	—	43	—	—	—	—	25	6	3	34
Poplar	24	114	18	5	4	27	17	6	4	27

St. Marylebone	—	111	—	—	—	—	13	3	6	22
St. Pancras	—	70	—	—	—	—	12	6	5	23
Shoreditch	20	62	24	7	5	36	26	7	5	38
Southwark	56	77	18	5	5	28	17	5	4	26
Stepney	9	79	18	10	5	33	24	17	8	49
Stoke Newington	86	126	21	4	6	31	17	4	6	27
Wandsworth	90	135	15	2	4	21	23	6	7	36
Westminster	56	155	17	4	5	26	17	2	9	28
Woolwich	—	204	—	—	—	—	21	7	4	32
Total: County of London	31	110	18	4	5	28	19	6	5	29
East Ham	—	193	—	—	—	—	17	6	4	26
West Ham	29	97	22	7	6	36	13	7	4	24
Leyton	33	98	33	15	9	57	18	6	4	28
Walthamstow	16	141	36	6	4	46	19	5	6	30
Penge	135	128	21	—	5	26	23	8	5	28
Acton	—	105	—	—	—	—	22	4	3	29
Tottenham	24	153	26	—	2	28	11	4	7	22
Hornsey	—	107	—	—	—	—	24	11	9	44
Barking	53	205	9	5	2	16	20	9	3	32
Willesden	67	130	23	3	5	31	22	6	3	31
[1] Total Outer Areas	30	129	24	5	6	35	17	6	5	29
Total Survey Area	31	115	19	4	5	29	18	6	5	29

[1] In a few cases the proportions of juvenile, fiction and general in the whole were estimated.

TABLE IX

Traffic Casualties, 1881–1928.

Metropolitan Police Area (Greater London, excluding the City).

Year.	Number of Persons		Vehicle responsible for Casualty.					
			Mechanically Propelled.		Horse drawn.		Pedal Cycles.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1881	127	3,400	—	1	127	3,362	—	37
1891	147	5,637	2	9	143	5,291	2	337
1901	186	9,197	5	187	175	6,761	6	2,249
1911	426	18,749	291	9,408	116	5,134	19	4,207
1921	571	22,647	490	15,045	61	2,306	20	5,296
1929	1,362	55,503	1,289	45,464	37	1,674	36	8,365

CHAPTER X

LONDON OCCUPATIONS AND INDUSTRIES

Distribution by Locality

The growth and distribution of the number of persons occupied in London and its neighbourhood resemble those of the total population of that area, with some modifications that are related to the varying grouping by sex and age in different boroughs. It is therefore not necessary to consider intermediate years, but only to contrast 1921 with 1891. This comparison is made in Table I (p. 327), which shows that in the County of London the number of occupied males increased $10\frac{1}{2}$ per cent. in the 30 years, in the adjacent boroughs nearly 140 per cent., and in the Survey Area [1] as a whole 25 per cent. Of occupied females the corresponding increases were 16 per cent., 135 per cent. and 28 per cent. Within the County there has been a considerable decrease in the centre, a slighter fall in the east, and an increasing rate of growth as we look successively north, west and south.[2]

The proportion of all males enumerated who are stated to be occupied has increased in the 30 years from 62·3 to 66·6 per cent. in London and neighbourhood as a whole. This proportion in 1921 was relatively low in East London and West Ham, and high in the North and West of London, and in Hornsey. The differences are closely related to the proportion of children in the population. In all districts the great majority of all males over 20 and under 65 years are occupied, with the result that the percentage of occupied persons is

[1] Including Penge.

[2] For the boroughs comprised in these areas, see note, p. 337.

highest in the well-to-do areas, where the proportion of children is lowest. (See Chapter II, p. 65.)

The proportion of females occupied in the whole area has risen from 29·2 per cent. to 31 per cent., and the local variations correspond with those observed for the males.

Ages

When, as in Table II (see p. 328), we work out the percentages occupied for different age-groups, the relations are a little complex. With the raising of the school-leaving age and other causes the proportion occupied under 15 years of both males and females has fallen perceptibly. But in the case of girls there has been an increase of occupation between 15 and 20 years, which, when the broader group 10 to 20 years is taken outweighs the decrease in the small number occupied under 15. With males the proportion occupied in the age-groups 45 to 65 and above 65 has slightly increased as in the case of females, the proportion over 65 years has decreased.

As between London and the external boroughs, there is little variation in the proportion of males occupied except that in the residential group fewer are occupied under 20 years. Among females a great deal depends on the proportion between married and single. This is clearly brought out by the following illustration.

Boroughs.	Females aged 12 and upwards in 1921.		Percentage Occupied.		
	Single.	Married or Widowed.	Single.	Married or Widowed.	All.
Hampstead . .	25,518	21,145	71·5	16·8	46·7
Shoreditch . .	16,194	24,188	70·8	28·5	45·7
West Ham . .	45,942	69,972	65·6	8·7	31·3

Evidently a very detailed analysis would be needed to disentangle and classify the variations.

Table III (p. 328) shows the distribution of the

working population by age. Among males this population is definitely older than in 1891, owing to the diminished proportion of those under 20 years in the whole population and the smaller proportion of them occupied, and owing to the war losses in the age-group 20 to 45. Among females only the first of these causes applies. The variation between the County and the external boroughs is not great among males, but among females there is a deficiency in the middle age-groups in the eastern external boroughs, owing to the larger proportion of married women.

Though the phrase "average family" is technical, and its construction somewhat fictitious, its computation brings to light some salient features. The dividend is the whole population, the divisor the number of "private families," that is separate occupiers, who do not keep hotels, etc., or are not in charge of institutions. The institutional and hotel and lodging-house population is thus distributed among the families, and a "family" may consist of one or more adults in private lodgings or of any mixed domestic group.

"AVERAGE FAMILY" IN LONDON AND ENGLAND AND WALES, 1921.

	County of London.		*England and Wales.*	
	Persons 000's.	Number per Family.	Persons 000's.	Number per Family.
Occupied—				
Males: 18 years or over .	1,269	1·13	10,958	1·25
„ Under 18 years .	117	0·10	1,154	0·13
Females: 16 years or over .	742	0·66	4,713	0·54
„ Under 16 years .	39	0·04	352	0·04
Total occupied . .	2,167	1·93	17,178	1·96
Unoccupied—				
Males: 18 years or over .	92	0·08	775	0·09
„ 14 to 18 . .	40	0·03	311	0·04
Females: 16 or over . .	1,038	0·93	9,524	1·09
„ 14 to 16 . .	44	0·04	399	0·04
Children: 5 to 14 . .	728	0·65	6,377	0·74
„ Under 5 . .	376	0·34	3,323	0·38
Total unoccupied . .	2,318	2·07	20,709	2·38
Total	4,484	4·00	37,887	4·34
Number of private families (000's)	*1,121*	—	*8,739*	—

The London "family" is smaller than that of England and Wales, owing to a smaller number of unoccupied women and fewer children. The number of occupied men is also a little smaller, and of occupied women is larger. How much of the difference is due to the housing arrangements of London as compared with those of the whole country and how much to actual difference of the size of the physical family it is not possible to say; nor, of course, do we know how many persons outside the County are supported by persons resident in it.

Classification by Occupation

It is not possible to make a straightforward comparison of the numbers engaged in different occupations between 1891 and 1929. Indeed, owing to many changes in classification, it is necessary to take three steps, viz. from 1891 to 1911, 1911 to 1921, and 1923 to 1929. These three intervals, however, covering as they do the pre-war, the war, and the post-war periods, correspond to three phases of change. A feature of the first period is the growth of Outer London, and since Charles Booth gives no occupation statistics for the external boroughs it is necessary to use the Census classification. On the other hand, to afford comparison with Charles Booth's detailed analysis of industries in his Industrial Volumes, and in particular to make use of his classification by ages which was obtained from unpublished material and cannot be adjusted, it is thought best to make an additional comparison between 1891 and 1911 on his basis. At these dates there were few important changes in the Census enumeration.

In the Census of 1921 such radical alterations were made that it is not possible to carry on the earlier classification. It is, however, possible to use the 1911 material (but not that of earlier censuses) in such a way as to make it comparable with 1921; but in order to do this it is necessary to take as our area the whole of London and the five Home Counties in one aggregate.

For 1923 and afterwards, the statistics of persons

registered under the Unemployment Insurance Acts are available. Here the only unit of area is one that is nearly identical with Greater London. Comparability with the earlier figures is vitiated by the fact that while the latter relate to all occupied workers, the Insurance statistics only include manual workers, and others whose salaries are less than £250 per annum, and moreover exclude certain uninsured occupations, e.g. domestic service.

While, therefore, the Tables contain a great deal of interesting comparative detail, it is impracticable to give any summary account of the trend of change in occupations over the whole period. This is the less to be regretted because the movements in the three periods were different, and are perhaps more readily understood if the sequence is broken.

Census Account, 1891 and 1911

In the series of Tables A in Appendix III (pages 410–3) the Census account of those occupied in the twenty-two Occupational Orders is given, with some compression, for five divisions of the County of London and two groups of external areas. The summary, in which the districts are merged, is in Table IV (p. 329). In 1891 details are available for only four of the external boroughs, but at that date the remaining six were not populous, and there is a margin of only 3 or 4 per cent. to distribute among the industries. The numbers entered under General Labour are smaller in 1911 owing to better definition.

The general change in the 20 years in distribution among occupations is indicated by this very broad classification. The entries Government, Commercial and (for males) Domestic [1] showed considerable increases. Among manufactures the whole group of metal trades had increased and women had obtained a greater footing in them. The number of women in domestic services had hardly increased, but in nearly every other class

[1] Includes a miscellany in which indoor servants at private houses are a small minority.

(except dress) there had been a considerable rise, starting from rather small numbers.

Local movements cannot be summarised, but can be studied from the Tables A. It must be remembered, however, that this classification is by place of residence, not place of work (see p. 323 below).

Charles Booth's Classification, 1891 and 1911

Charles Booth in his account of the Industries of London (Second, or Industrial Series, Vols. I–IV) reclassified the Census under 87 sub-groups of occupations, arranged in 15 main groups. These main groups are on the whole similar to those adopted in the Census, but differ sufficiently in detail to make them non-comparable. Accordingly his formulæ relating his statistics to the Census enumeration, have been applied to the Censuses of 1901 and 1911 for the County of London (but not for the external areas). The results for the main groups are shown in Table V (p. 330), and the details in Table B (p. 414). The broad tendencies indicated just above, are the same whichever classification we look at; but the variation in detail is remarkable, and illustrates the necessity of having access to a detailed list of occupations, and the danger of comparison from one date to another, except when uniformity of classification has been verified. Charles Booth's classification is given in great detail in his Industrial Volumes, and the *minutiæ* of the Census groups can readily be found from the Census volumes.

The occupations are described in some detail in Appendix Table B, and there also the changes indicated for large groups in Table V can be analysed.

Charles Booth made diagrams for each of his sub-groups showing the relation of the age-distribution of the males in each industry to that of all occupied males in London, and he studied the figures both from the point of view of employing old or young, and from that of the growth or decline of industries reflected in a relative surplus of young and old.

From the Census of 1911 we have made a similar tabulation of age-grouping in the same groups, and also read from the Booth diagrams the approximate numbers in 1891 (for the actual numbers are not printed). Detail in 1891 is not available for females, and in this case so much depends on the age of marriage and on the proportion of married women employed that mere age-distribution is not informative. Table VI shows the distribution at the two dates in the 15 main groups. All the statistics of the Table are also shown in the accompanying diagram.

Though the groups of occupations are so broad the Table deserves careful study. We notice, for example, that in the building group the massing of ages over 25 years is much greater than in the aggregate for London at both dates, but that the excess is more marked in 1911, when the proportion over 55 years is 192 per 1,000 against 118 for all industries. In metals and their products, on the other hand, there is an excess proportion employed under 25 years in 1911.

The same relations are examined in another way in Table VII. We may take it that men are usually fixed in their industries by the time they are 25 years, and so we can use the number between the ages 20–25 as a measure by which to compare with it the number below 20 and the number above 25, to watch the inflow of recruits on the one hand, and on the other the relative number of survivors in the industry from recruits of the previous decades. Thus a growing industry will show an excess in the number under 20 years compared with those aged 20 to 25, while a declining industry will show a relative excess of those over 25. This method is similar in intention to Charles Booth's well-known diagrams of age-distribution in occupations. Thus in 1911 (Table VII) in all industries, for every 100 in the age group 20–25, there were 109 boys and lads under 20, and 555 men over 25; while in 1891 the number under 20 was greater and over 25 less. In the building group at both dates there was a deficiency of the young (since in London

boys do not attach themselves to this industry but drift into it later), but this is more marked in 1911, the sign of declining trade. Throughout the Table variations of this kind can be noticed. But the broad groups are misleading in this respect, since one constituent may be declining while another is increasing, and reference should be made throughout to the more detailed Appendix Table B.

Occupations and Industries, 1911 and 1921

In the Census of 1921 the method of dealing with occupations was radically altered, and the classification was so modified that there are few cases in which comparison can be directly made with earlier Censuses.

In the 1911 and earlier Censuses persons were classified partly according to the industry in which they worked, partly according to their craft or occupation. Thus clerks were generally included in Order V, Commercial Occupations, and carpenters under Order XIII (Wood and Furniture) or Order XII (Building). In 1921 there are two distinct classifications under the terms Industries and Occupations respectively. In the *Industries* Volume a clerk or carpenter employed permanently by a Furniture Manufacturer is classed under Furniture; a gardener employed by a Local Authority under Local Government and so on. In the *Occupations* Volume all carpenters are listed under Workers in Wood, all gardeners under Agricultural Occupations, and clerks (other than in Central or Local Government service) are grouped together. In the Industries Volume there is a partial cross-classification showing how the industrial total is built up from occupations.

Neither classification is comparable with that followed in 1891 and 1901, nor with the main Tables of 1911; but in 1911 an experiment was made in Industrial Classification on the same lines as in 1921. Unfortunately the order and detail of the two classifications are widely different. A careful comparison was made for the London and Cambridge Economic Service (Special

Memorandum XVII, A) and the two Industrial classifications were regrouped under a hundred or more headings in a way that the Census authorities agreed led to comparable results. Thus for England and Wales as a whole comparison can be made for most of the important industries between 1911 and 1921. But when we come to separate localities further difficulties are found. The industrial local classification in 1921 is by *place of work*, while that in 1911 was necessarily by *place of residence*, since the workplace was not recorded. The County of London is not a satisfactory unit, since there is a net influx of some 450,000 of persons residing outside and working within the county. In 1921 statistics were given for "Greater London," but not in 1911. The smallest aggregate that can be used comparatively is the County of London, together with the five Home Counties (Essex, Middlesex, Herts, Surrey and Kent). Apart from agricultural and other land industries, coal, paper, cement, artificial silk, brewing and dock yards, the industries included are principally located in London or its immediate neighbourhood in Essex, or in Middlesex. A limited conspectus is therefore possible for Greater London in 1921 compared with 1911.

There is yet a further difficulty. A considerable number of persons made no statement about their place of work, or stated that they had no fixed place; and in the Census Tables these are not assigned to any particular locality. In the note appended an examination is made of the relevant statistics and it is found that in the majority of industries a sufficient approximation can be made.

The results are summarised in Table VIII, in which the non-located are attributed to industries by the method explained in the note, p. 338.

Among males (ignoring the first entry, which includes agricultural labourers, etc.), the principal change is the great increase in the wide group of metals, machinery, vehicles, etc. The fall in the group of dealers, etc., is also remarkable, but it is compensated by an increase

in the number of women. Besides entry into shops, commerce and professions, there are more women in the metals group; the corresponding deficit is to be found under dress and domestic service. It is to be remembered that women clerks, etc., are in this classification attributed to the industries they serve.

The details of Table VIII, given in Appendix Table C, indicates how far the numbers depend on the allocation of the "non-located."

For particular industries more detailed study is necessary, especially with reference to the occupations included in the industries; but this work is left to the relevant chapters (in the forthcoming volumes), where the accuracy of the possible comparisons can be considered more closely.

Insurance Statistics 1923 and 1929

By the courtesy of the Ministry of Labour we have been furnished with the details for a Table showing the number of persons registered under the Unemployment Insurance Acts in the London division, which is very nearly coincident with Greater London, as defined in the Census Reports. The Table shows the numbers in each of nearly 100 industries for each year, 1923 to 1929 inclusive, separating men, lads, women and girls. The limits of age are 16 to 18 years for lads and girls, and 18 and upwards for men and women. On January 1, 1928, the upper limit was lowered to 65 years in consequence of the revision of the conditions for old age pensions. In the final percentage columns of Table IX and of Appendix Table D, allowance is made for this change, but in the columns showing the numbers in the year 1929 no such adjustment has been made, and in using the Table for comparison of the two years, about $3\frac{3}{4}$ per cent. should be added to the number of males in 1929 and about 0·7 per cent. to those of females.

In Table IX [1] the industries have been grouped on

[1] The statistics for 1924 to 1928 are on file, and are available for use in accounts of particular industries in forthcoming volumes.

the same system as in Table VIII. The Employment Exchange classification is industrial, not occupational, and the definitions of the groups are nearly the same in the two tables. But Table VIII includes all Essex, Hertfordshire, Surrey and Kent, as well as Middlesex and London, while Table IX includes London, Middlesex and only the parts of the other counties within about 15 miles of Charing Cross. Also Table VIII includes all occupied persons, while Table IX is limited to manual workers and others with salaries of less than £250, aged over 16 (and in 1929 under 65 years); it also excludes agriculture, domestic service, and the permanent staff of railways.

With suitable care and with attention to the details given in Appendix Tables C and D, some interesting movements may be followed. Thus in building and road construction the numbers fell 16 per cent. from 1911 to 1921 and, in the smaller district, rose 16 per cent. between 1923 and 1929. The metal and engineering and vehicle industries increased in numbers enormously during the war, and between 1911 and 1921 the proportion of females increased from 9 to 16 per cent. of the males. The increase continued, but more moderately, after the war, and (among insured persons) the proportion of females to males also increased further from 20 to 27 per cent. between 1923 and 1929. The principal increase in this group in the latter period is in electric engineering and apparatus, with a small growth of the motor industry. General engineering, which had increased so rapidly during the war, fell off after 1923, but the smaller number classified under structural engineering increased.

The last column of Table D shows a great variety of rates of growth, varying from decreases of more than 20 per cent. to increases of over 100 per cent. It is to be remembered that the numbers in this (as in all the Tables) include unemployed persons, whom we may expect to be more numerous in the industries where the total numbers included have declined. The Table indicates a very considerable mobility of labour between industries,

but it does not determine what proportions of this mobility are due to recruitment of the young, to influx from other counties, to change of industry without change of occupation, or to actual change of occupation.

CHAPTER X: TABLES

TABLE I—Distribution of Occupied Persons by Locality: Totals and Proportions Occupied. 1891 and 1921.

County of London and Adjacent Boroughs.

	Numbers occupied in 000's.						Ditto as Percentages of whole population.					
	Males.		Females.		Persons.		Males.		Females.		Persons.	
	1891.	1921.	1891.	1921.	1891.	1921.	1891.	1921.	1891.	1921.	1891.	1921.
County of London:												
Central	84	44	49	28	132	72	77	68·4	43	40·9	57	54·2
East	221	197	97	97	318	294	63	61·6	27	30·0	45	46·3
North	294	310	170	194	464	504	64	68·2	32	35·1	47	50·2
West	208	240	155	180	363	420	61	68·4	36	38·8	47	49·4
South	447	595	197	281	644	876	61	66·6	25	28·0	42	46·1
Totals	1,254	1,386	668	781	1,922	2,167	63	66·9	30	32·4	46	48·4
External, East:												
West Ham	61	93	18	36	79	129	60	63·5	18	23·5	39	43·0
Leyton	16	40	6	17	22	57	53	66·3	19	25·2	36	44·5
East Ham	10[1]	46	4[1]	17	14	64	58	66·8	25	23·3	43	44·4
Walthamstow	12[1]	41	6[1]	17	18	58	54	65·9	25	25·3	39	45·4
Tottenham	19	46	7	20	26	66	55	65·5	19	26·1	37	44·7
Barking	4[1]	11	2[1]	4	6	15	56	63·8	26	22·1	—	42·8
Totals	122	277	43	111	165	389	—	—	—	—	—	—
External, North and West:												
Hornsey	12[1]	26	8[1]	15	20	42	63	69·4	33	30·6	45	47·4
Willesden	16	52	9	25	25	77	57	67·8	27	28·0	41	46·4
Acton	6[1]	19	4[1]	10	10	29	58	67·1	30	29·5	41	46·8
Totals	34	97	21	50	55	147	—	—	—	—	—	—
Outlying:												
Penge	5	7	3·5	4	8	11	58	62·1	30	26·0	—	42·7
Grand Total	1,415	1,767	736	946	2,151	2,713	62	66·6	29	31·0	45	47·5

[1] Estimated by applying percentage occupied in London age-group by age-group to borough populations.

TABLE II

PERCENTAGE OF POPULATION OCCUPIED IN EACH AGE GROUP, 1891 AND 1921.

County and External Areas.

Age-Groups.	County.		External, East.	External, North and West.	All.
	1891.	1921.	1921.	1921.	1921.
Males:					
10– .	52·9	47·3	47·5	45·3	47·2
20– .	97·0	96·8	98·3	98·0	97·2
45– .	92·5	94·7	97·0	95·3	95·2
65– .	58·0	60·1	59·1	59·1	59·9
Females:					
10– .	40·5	43·4	41·1	40·7	42·
20– .	—} 39·0	44·6} 39·7	34·4	41·1	43·0
45– .	—}	29·3}	14·9	21·9	27·0
65– .	19·2	13·7	7·0	9·1	12·6

TABLE III

AGE DISTRIBUTION OF OCCUPIED PERSONS.

Age-Groups.	County.		External, East.	External, North and West.	All.
	1891.	1921.	1921.	1921.	1921.
Males:					
10– .	17·1	13·4	15·5	12·3	13·7
20– .	59·8	53·8	53·9	55·3	54·0
45– .	20·1	28·2	26·8	28·4	28·0
65– .	3·0	4·6	3·8	4·0	4·3
Total .	100	100	100	100	100
Females:					
10– .	26·0	23·4	33·5	23·6	24·6
20– .	} 71·1	73·9{56·3	54·5	59·2	56·3
45– .	}	17·6	10·5	15·2	16·6
65– .	2·9	2·7	1·5	2·0	2·5
	100	100	100	100	100

TABLE IV

CENSUS CLASSIFICATION OF OCCUPATIONS, 1891 AND 1911.

London and Neighbourhood.

(For more detail, see Table A, pp. 410–3.)

Occupation.	County and 4 Boroughs.[1]				County and 10 Boroughs.[2]	
	1891.		1911.		1911.	
	Males. 000's.	Females. 000's.	Males. 000's.	Females. 000's.	Males. 000's.	Females. 000's.
Government	39	3	67	13	72	14
Defence	16	—	18	—	18	—
Professional	63	53	77	65	84	70
Domestic	33	344	62	331	65	353
Commercial	126	8	161	41	182	45
Transport	242	3	290	6	310	6
Agriculture and quarries	15	1	11	—	13	—
Metals and machines	90	2	128	9	140	10
Precious metals, watches	26	3	31	6	34	6
Building	141	—	150	—	165	—
Wood and furniture	57	7	68	9	73	10
Bricks, etc.	6	1	6	—	6	—
Chemicals	18	5	28	9	31	10
Skins and leather	16	4	16	7	16	8
Paper and printing	51	23	58	36	64	38
Textiles	27	26	34	33	37	35
Dress	78	149	77	172	80	184
Food, inns, etc.	141	43	177	78	190	82
General labour and undefined	98	2	50	—	54	—
All others	85	30	109	39	119	41
Total	1,367	708	1,618	854	—	—
Remaining Boroughs	48	28	135	58	—	—
Total Occupied	1,415	736	1,753	912	1,753	912
Unoccupied	856	1,787	787	1,940	787	1,940
Total Persons	2,271	2,523	2,540	2,852	2,540	2,852

[1] West Ham, Leyton, Tottenham, Willesden. (See note p. 59.)

[2] Also East Ham, Barking, Walthamstow, Hornsey, Acton, Penge.

TABLE V

CHARLES BOOTH'S OCCUPATIONAL CLASSIFICATION, 1891 AND 1911.

County of London.

Occupation.	Males. 1891. 000's.	Males. 1901. 000's.	Males. 1911. 000.s.	Females. 1891. 000's.	Females. 1901. 000's.	Females. 1911. 000's.	Females per 100 Males. 1891.	Females per 100 Males. 1911
Building trades .	129	152	131	1	1	1	1	1
Wood workers .	61	70	65	7	8	8	11	13
Metal workers .	63	79	81	2	3	6	3	7
Precious metals, watches . .	29	38	47	3	4	6	10	14
Sundry manufactures . .	29	33	35	9	11	15	32	43
Printing and paper	61	64	66	26	33	38	43	58
Textiles . .	9	8	8	7	11	11	83	14
Dress . . .	90	95	92	170	171	175	189	189
Food and drink .	111	121	126	27	35	56	24	44
Miscellaneous dealers	33	32	41	10	9	13	29	31
Commercial . .	119	139	142	9	23	39	8	27
Locomotion, etc. .	153	185	185	2	2	1	1	1
Labour . .	193	178	144	5	4	4	3	3
Public service and Professional .	115	138	154	52	60	69	45	45
Domestic service .	60	70	87	339	344	326	564	375
Total Occupied .	1,254	1,400	1,404	668	719	770	53	55
Unoccupied .	745	742	722	1,565	1,675	1,625	210	225
Total . .	1,999	2,142	2,126	2,233	2,394	2,395	112	113

For detail, see Appendix, Table B.

TABLE VI

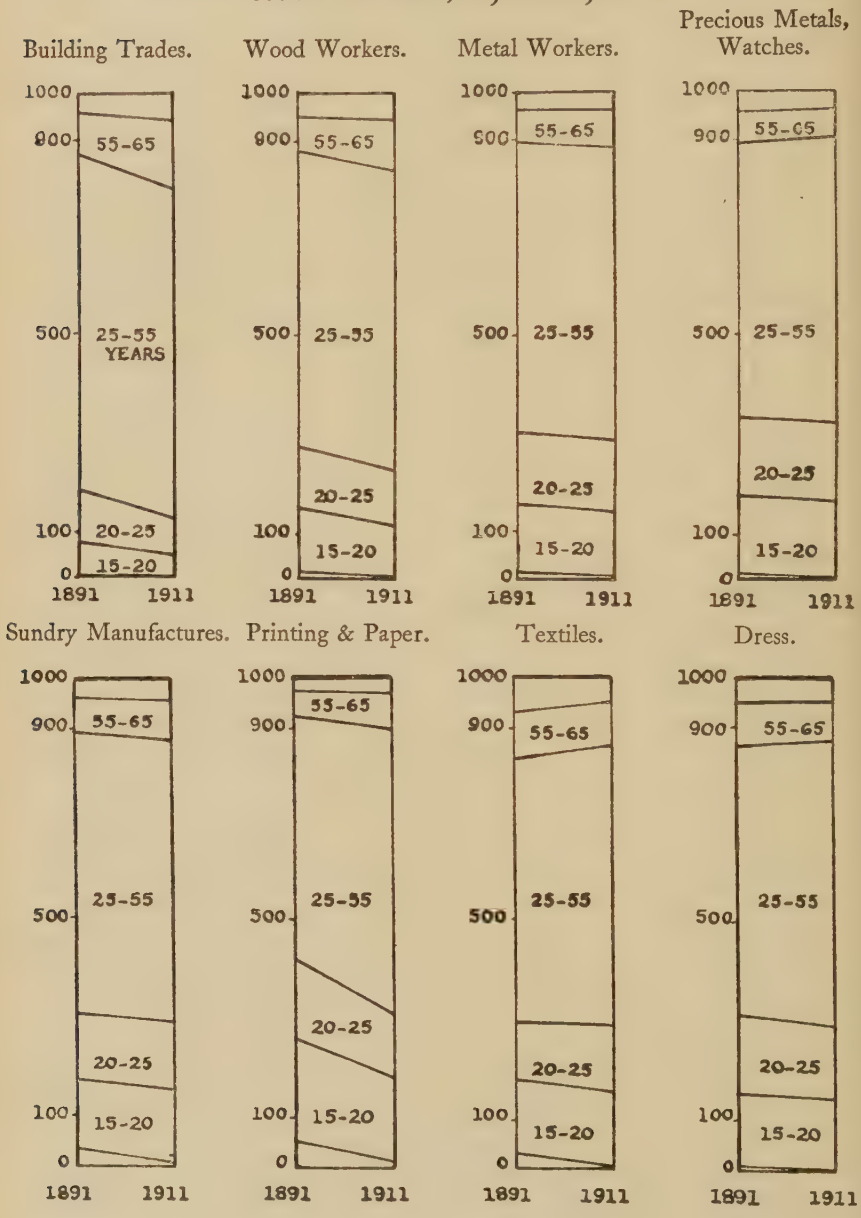
CHARLES BOOTH'S MAIN OCCUPATIONAL GROUPS, AGE-DISTRIBUTION, 1891 AND 1911.

County of London: Males.

Occupation.	Date.	Ages. 10 to 15.	15 to 20.	20 to 25.	25 to 55.	55 to 65.	65 and over	
Building trades	1891	6	70	106	692	91	35	1,000
	1911	*2*	*45*	*79*	*682*	*137*	*55*	*1,000*
Wood workers	1891	20	129	127	603	81	40	1,000
	1911	*9*	*108*	*115*	*615*	*105*	*48*	*1,000*
Metal workers	1891	17	143	144	594	73	29	1,000
	1911	*10*	*133*	*142*	*601*	*83*	*31*	*1,000*
Precious metals, watches	1891	20	156	156	560	71	37	1,000
	1911	*13*	*156*	*155*	*582*	*63*	*31*	*1,000*
Sundry manufactures	1891	30	149	136	578	73	34	1,000
	1911	*14*	*145*	*128*	*585*	*90*	*38*	*1,000*
Printing and paper	1891	51	205	170	500	51	23	1,000
	1911	*18*	*155*	*141*	*583*	*76*	*27*	*1,000*
Textiles	1891	29	145	122	536	102	66	1,000
	1911	*11*	*141*	*138*	*572*	*91*	*47*	*1,000*
Dress	1891	19	136	164	551	82	48	1,000
	1911	*10*	*133*	*144*	*589*	*80*	*44*	*1,000*
Food and drink	1891	27	147	153	585	64	24	1,000
	1911	*9*	*125*	*137*	*624*	*77*	*28*	*1,000*
Miscellaneous dealers	1891	27	133	132	579	84	45	1,000
	1911	*41*	*117*	*117*	*582*	*96*	*47*	*1,000*
Commercial	1891	20	190	187	527	54	22	1,000
	1911	*11*	*178*	*182*	*540*	*63*	*26*	*1,000*
Locomotion	1891	15	105	152	639	64	25	1,000
	1911	*10*	*92*	*117*	*675*	*80*	*26*	*1,000*
Labour	1891	87	169	124	530	66	24	1,000
	1911	*73*	*189*	*89*	*536*	*85*	*28*	*1,000*
Public service and professional	1891	17	103	158	613	70	39	1,000
	1911	*10*	*90*	*136*	*653*	*76*	*35*	*1,000*
Domestic service	1891	26	174	195	531	52	22	1,000
	1911	*13*	*135*	*180*	*587*	*62*	*23*	*1,000*
Total	1891	31	140	148	582	69	30	1,000
	1911	*17*	*125*	*131*	*609*	*84*	*34*	*1,000*

DIAGRAMS ILLUSTRATING TABLE VI

AGE DISTRIBUTION (PER 1,000) OF OCCUPIED MALES IN EACH INDUSTRY: COUNTY OF LONDON, 1891 AND 1911.



DIAGRAMS ILLUSTRATING TABLE VI

AGE DISTRIBUTION (PER 1,000) OF OCCUPIED MALES IN EACH INDUSTRY: COUNTY OF LONDON, 1891 AND 1911.

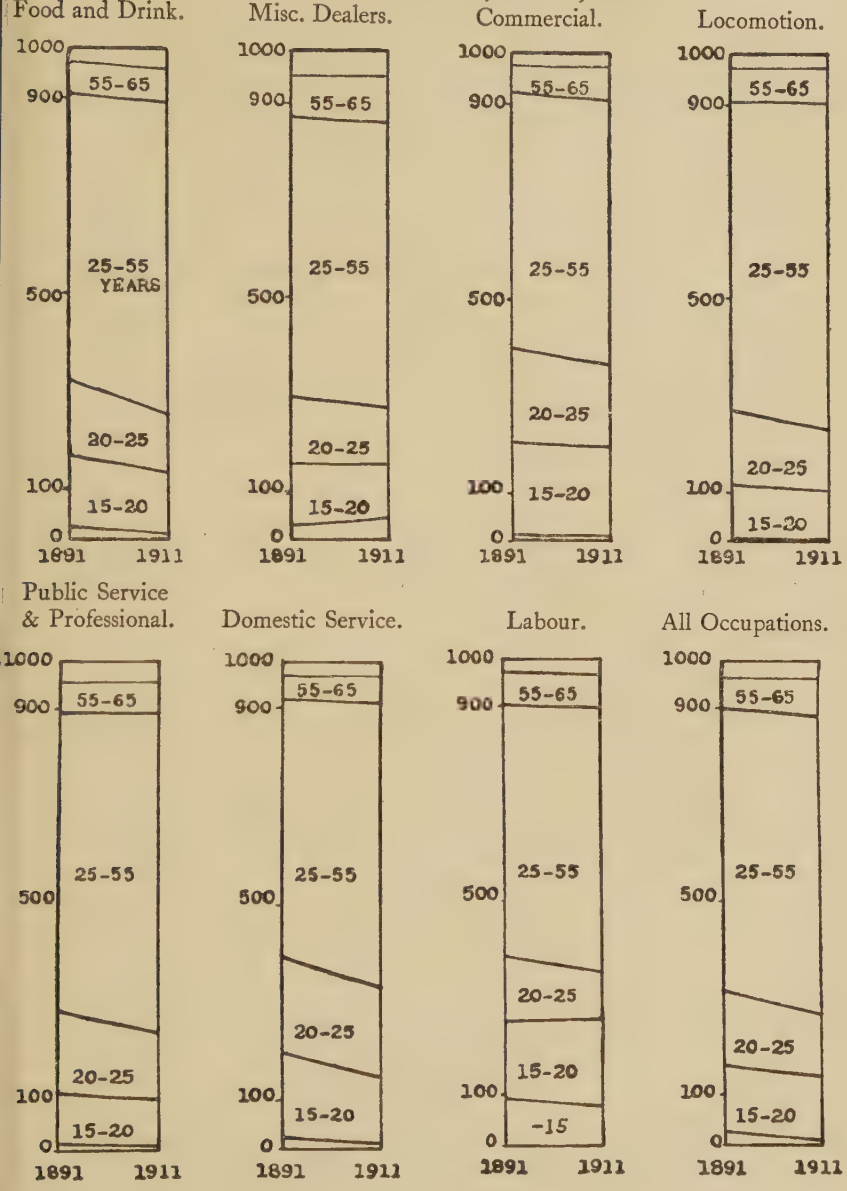


TABLE VII.

AGE-DISTRIBUTION BY OCCUPATIONS, 1891 AND 1911.

County of London.

(Males over 25 and under 20 in each of Charles Booth's main occupational classes shown as percentages of those aged 20–25.)

See pp. 321 and 337 for further explanation and pp. 428–9 for fuller detail.

Occupation.	Percentages of numbers aged 20 to 25.				Total Number of Males in 1911 as per cent. of total Number in 1891.[1]
	1891.		1911.		
	Under 20 Years.	Over 25 Years.	Under 20 Years.	Over 25 Years.	
All occupied .	114	461	109	555	112
Building trades .	71	772	59	1,106	102
Wood workers .	117	569	100	656	106
Metal workers .	111	483	101	505	127
Precious metals, watches . .	113	429	108	439	163
Sundry manufactures . .	131	502	124	577	121
Printing and paper	151	339	123	489	107
Textiles . .	143	574	111	516	96
Dress . . .	95	423	99	492	102
Food and drink .	113	652	98	534	114
Miscellaneous dealers	122	538	135	619	125
Commercial . .	112	323	104	347	124
Locomotion .	80	479	88	672	121
Labour . .	207	503	216	804	75
Public service and professional .	76	457	70	559	134
Domestic service .	103	505	82	373	145

[1] Based on Table V.

TABLE VIII

CENSUS CLASSIFICATION OF INDUSTRIES 1911 AND 1921.

NUMBERS EMPLOYED:

London and the five Home Counties.[1]

(Detail is given in Appendix, Table C.)

Industrial Groups.	Numbers employed. Males. 1911. 000's.	Males. 1921. 000's.	Females. 1911. 000's.	Females. 1921. 000's.	Number of Females per 100 Males. 1911.	1921.
Agriculture, quarrying, mining, cement, bricks	185	162	4	14	2	9
Glass, chemicals, soap	37	50	11	21	29	40
All metal manufactures, ships, vehicles, watches	214	316	18	49	9	16
Textile industries	9	11	14	12	159	107
Dress, boots, hats	94	91	224	161	240	176
Furriers, tanners, leather goods	22	21	8	10	33	51
Food and drink	92	97	37	55	40	58
Tobacco	4	5	6	9	132	170
Paper, stationery, printing, binding	94	111	45	55	48	50
Wood, furniture	80	71	9	9	12	13
Building, construction, road-making	267	225	1	3	—	1
Miscellaneous manufactures	43	57	19	36	44	62
Gas, water, electricity	40	58	—	2	—	—
Transport, road and rail, docks	304	314	3	14	1	4
Warehouses, porters, messengers	34	14[2]	4	1[2]	11	9
Shops, dealers, merchants, finance	590	553	137	251	23	45
Domestic service, indoor and outdoor	76	60	416	324	543	541
Government, professions, entertainments, and general residuum	629	732[3]	404	440[3]	64	60
Total	2,814	2,948	1,360	1,467	48	50

[1] Essex, Herts, Middlesex, Surrey, Kent.

[2] Fall due to transference of telephones to Government.

[3] These include 78,000 males and 19,000 females proportionally estimated from a general residuum of persons in England and Wales whose industry was not defined or could not be classified. See note, p. 340.

TABLE IX

UNEMPLOYMENT INSURANCE CLASSIFICATION.
NUMBER OF INSURED PERSONS: SUMMARY.
London Division (*Greater London*).
(For detail see Appendix, Table D.)

Industries.	Males. 1923.	Males. 1929.	Females. 1923.	Females. 1929.	Total. 1929 as percentage of 1923.
Bricks, earthenware, quarries, etc.	6,920	8,990	1,020	1,200	133
Glass, chemicals, soap, etc.	40,630	43,930	19,650	20,360	110
All metal manufactures, ships, vehicles, watches	209,970	211,660	41,500	57,410	110
Textile industries	6,740	5,820	10,790	13,070	110
Clothing	46,310	47,060	102,330	116,630	112
Leather, furriers, etc.	12,830	11,850	8,780	9,790	102
Food, drink	64,530	59,790	47,310	47,830	99
Tobacco	5,350	5,940	8,210	11,840	133
Paper, printing	81,310	85,920	49,170	51,870	108
Wood, furniture	44,680	55,400	10,130	10,520	124
Building construction	177,140	197,390	2,550	2,560	116
Miscellaneous manufactures	31,860	40,960	15,590	22,100	136
Gas, water, electricity	41,070	37,420	1,750	1,720	95
Transport, docks	199,790	201,830	8,620	9,320	105
Shops, dealers, merchants, finance	238,920	293,950	145,230	181,310	127
Professional, personal other services	195,600	187,930	138,840	161,060	107
Total	1,403,650	1,495,840	611,470	718,590	—
Estimated addition for persons over 65 years		57,000		4,900	
		1,553,000		723,000	113

In 1929 persons over 65 years were excluded from insurance. To attain comparability with 1923 it is necessary to add nearly 3·75 per cent. to males and 0·73 per cent. to females throughout to the 1929 entries. This has been done in each industry to obtain the final percentage column, but no addition has been made in the separate industries as given under 1929.

CHAPTER X: NOTES ON STATISTICS.

Distribution of Occupied Persons by Locality (Table I).

The divisions adopted in the Summary Table are necessitated by the occupations Census of 1911, and are as follows: *Central*: City, Finsbury, Holborn; *East*: Bethnal Green, Shoreditch, Poplar, Stepney; *North*, Islington, Hackney, Stoke Newington, St. Pancras, St. Marylebone, Hampstead; *West*: Westminster, Paddington, Kensington, Chelsea, Fulham, Hammersmith; *South*: all boroughs south of the Thames.

Note on Contents of the Different Orders (Table IV).

Government: National and Local, including Post Office and Police, but not Teachers. *Defence*: Army and Navy, effective and retired: *Professional* includes subordinates, and theatres, etc. *Domestic*: Indoor and outdoor and club and institution service. *Commercial* excludes clerks in industrial firms. *Transport*: Rail, road, water, dock labourers, porters, warehousemen; not Government telephones, etc. *Agriculture, etc.*: Land and quarrying work, florists and non-domestic gardeners. *Metals, etc.*: All working on metals (except precious metals), machines, vehicles, including electric apparatus. *Precious metals*: Jewellers, watch-makers, and scientific instruments. *Building*, including road construction. *Wood and Furniture* includes shop fittings. *Bricks, etc.*, includes pottery and glass. *Chemicals* includes matches, explosives, oil, candles, soap, etc. *Food, etc.*, includes tobacco, drinks, and restaurants, inns and lodging-houses. In general, dealers are included with manufacturers.

Note on Table VII.

The construction of this Table may be thus illustrated. From Table VI we have

	1891.	1911.
Building: Ages—10–20 . . .	76	47
20–25 . . .	106	79
25 and over . .	818	874
	1,000	1,000

Reduce (or increase) each column proportionately, so that the number aged 20 to 25 becomes 100.

	1891.	1911.
Building: Ages—10–20 . . .	*71*	*59*
20–25 . . .	100	100
25 and over . .	*772*	*1,106*

The numbers in italics are given in Table VII, the 100 at ages 20 to 25 being implied.

CENSUS STATISTICS OF INDUSTRIES IN LONDON AND NEIGHBOURHOOD, 1921.

Total Numbers working.

The data for the total numbers of persons working in London and the Home Counties[1] are as follows:

District. (*a*)	Occupied Residents. Total. (*b*)	Working in County of Enumeration. (*c*)	Working outside County of Enumeration. (*d*)	Workplace not Located. (*e*)	Non-residents working in District in Column (*a*) (*f*)
		MALES 000's			
County of London	1,389	1,133	76	181	399
Essex . . .	460	271	139	50	22
Middlesex . .	383	174	169	40	40
Herts . .	101	75	19	7	4
Kent . . .	352	257	42	53	8
Surrey . .	278	158	85	35	16
Total .	2,964	2,069	530	365	488
		FEMALES 000's			
County of London	785	709	21	55	143
Essex . . .	178	112	55	10	4
Middlesex . .	183	111	60	12	12
Herts . .	45	37	6	2	1
Kent . . .	137	112	15	10	2
Surrey . .	136	101	25	10	7
Total .	1,464	1,183	182	99	170

Columns (*c*), (*d*) and (*e*) together account for the whole of Column (*b*). Thus from Column (*d*) 139,000 males resident in Essex worked in London (or possibly another Home County) and are included in the 399,000 in Column (*f*), (or possibly elsewhere in Column (*f*)).

It may be assumed that persons not located—a total made up of those with no fixed workplace and of those who make no statement—in the great majority of cases work somewhere in London or the Home Counties, or (if they travel) have their headquarters there.

The excess of the totals of Column (*d*) over those in (*f*), viz. 42,000 males and 12,000 females, is the aggregate net efflux from the whole of London and the Home Counties to outside. There is no evidence about the contents of this total, but presumably the most important constituent is visitors from other parts of the United Kingdom and abroad,

[1] Census 1921. County of London. Part III. Supplementary Tables.

who are occupied in their own places; since the Census was taken on a Sunday in late June this number is naturally considerable. Another and probably small constituent consists of persons going daily from within the Home Counties to work over the border, e.g. from Uxbridge to Slough; this may be sufficiently balanced by residents in Slough working in Uxbridge, etc.

To get the total working in London and the Home Counties we have to combine columns (*c*), (*e*) and (*f*) with an estimate of persons enumerated outside the Home Counties at such places as Amersham, Beaconsfield, Maidenhead, Hayward's Heath and Brighton, who normally work in London. In the summer especially this is not negligible, but judging by the number of trains available can hardly exceed 20,000. There is also an unknown number away on Census night at more distant places on holidays or business.

When all these factors are balanced it appears highly probable that the number of persons who habitually work in London and the Home Counties does not differ by more than 50,000 males and 10,000 females from the aggregates of occupied persons enumerated in them. To obtain comparability with other figures we must, however, subtract about 6,000 students over 18 years of each sex who are included in these Tables and not in others relating to industry or occupation.

We may then estimate the numbers working in London and the Home Counties at

Males: 2,960,000 ± 50,000
Females: 1,445,000 ± 20,000

Occupations.

So far we have dealt with totals. When we come to separate occupations, we find in the Industries Volume two Tables that relate to local distribution. Of these, Table II relates solely to Greater London and also ignores persons whose workplaces are not located; it is therefore useless for our purpose.

Table IV is of the following form:

	Cement Manufacturers.		Artificial Stone, etc.	
	Males.	Females.	Males.	Females.
England and Wales .	18,303	634	8,286	374
Bedfordshire . .	446	3	255	2
Essex . . .	1,289	13	372	3
Herts . . .	7	—	74	—
Kent . . .	8,207	136	314	2
London . . .	514	99	755	58
Middlesex . .	131	2	202	2
Surrey . . .	117	3	247	3
Yorks, etc. . .	—	—	—	—
No fixed workplace or no statement . .	832	14	467	2

The only method of approach seems to be to distribute the not-located among the districts in proportion to the located. Thus in Cement there

are 18,303 — 832 = 17,471 males located,[1] and 10,265 of these are located in London or the Home Counties. We therefore add

$$832 \times \frac{10{,}265}{17{,}471} = 500 \text{ (approx.)}$$

to 10,265 — say 10,800 — to obtain an estimate for those working in London and the Home Counties. This has been done for each comparable group of industries separately. In the instance of Cement it is clear that we are not dealing with a London Industry, and the Table makes clear other cases where the industry is principally located beyond Greater London.

Table IV, however, is not complete, for it omits Coal (which can be sufficiently estimated from other Census data) and a certain residuum of persons whose industry was undefined or not readily classified. For England and Wales this residuum amounted to 313,000 males and 66,000 females. Now in London and the Home Counties are found approximately 25 per cent. of all occupied males in England and Wales and 28 per cent. of all occupied females. These percentages result in the estimate for the residuum in London, etc., of 78,000 males and 19,000 females. We have when we combine the records and estimates:

TOTAL WORKING IN LONDON AND THE HOME COUNTIES.

	Males. 000's.	Females. 000's.
Located	2,558	1,337
Not definitely located [2]	312	111
Residuum	78	19
	2,948	1,467

The totals are within the rough limits of the former estimate, and we may therefore use the proportional method described of allocating the non-located with discretion, and with consideration of the circumstances of each industry. The proportion not definitely located varies greatly from industry to industry. Of the 313,000 males, Central and Local Government account for 117,000, shopkeeping and dealing of all sorts for some 40,000, and building for 42,000. Of the 110,000 females, 48,000 are engaged in domestic or restaurant service, 25,000 in miscellaneous industries which we cannot analyse in any case, 13,000 in professional work. In most of the industries in which we are interested the doubtful margin is relatively small, but it may be sufficient to make us doubtful whether or no there has been a trifling increase or decrease in numbers in the decade. In Appendix, Table C, the percentage of the estimated number in London and the Home Counties in 1921 that in fact was not located is shown in small print. When this percentage is considerable the entries should only be used for very rough comparisons.

[1] Ignoring a few who work outside England and Wales.

[2] This does not agree closely with the non-located (residing in London) in the former Table. The discrepancy may be due to the residuum, where the males not attributed to an industry may also be non-located.

CHAPTER XI

UNEMPLOYMENT AND ITS TREATMENT

UNEMPLOYMENT as a general problem does not receive formal treatment or marked prominence in Charles Booth's Survey. For this there is a simple explanation. The trade depression of the middle "eighties," which led to the Royal Commission of 1885 and the notorious Mansion House Fund of 1886, and by the interest it directed to the condition of the people contributed to the Booth Survey itself, began to pass as that survey got under way. In the most formative years of Charles Booth's study (from 1887 to 1890), trade and employment were improving.

Moreover, though statistical records of unemployment in London, for comparison with other districts, are not available before 1893, various reasons conspire to suggest that the diminution of unemployment in these years was more marked in London than elsewhere. One reason is the fact (mentioned again below) that when these records do become available—in 1893—and for some years after, the level of unemployment in London appears to be definitely lower than in the United Kingdom as a whole. Another is the fact that a Mansion House Fund for the Unemployed could be opened in 1891 without drawing more than £2,500 in subscriptions from the charitable, and could be taken in charge by the Charity Organisation Society and diverted to harmless ends. Yet another is found in consideration of the building trade and its important part in the industrial life and the employment problem of London. Though separate data for London have not been obtained

for these early years, it is known that, from the middle "eighties" onward, building as a whole was passing from prolonged depression to the prolonged prosperity which culminated about 1900; this hyper-cyclical movement of its principal industry unquestionably played a dominant part in pushing unemployment to the back of the London stage.

Special problems of employment—like that of dock labour—did present themselves even in those days, and received special attention from Charles Booth and his colleagues between 1887 and 1893. But even with dock labour, public attention in these years was caught less by the demoralising under-employment which it involved, than by the low rate of hourly pay; the aim and achievement of the great strike of 1889 was the "dockers' tanner,"—a will-o'-the-wisp of the same species as has deluded dockers ever since.

For the years before 1893 the course of unemployment in London must be inferred indirectly. From that year onwards it is possible to make statistical comparisons between London and the country as a whole, based first on the trade union returns and later on the records of unemployment insurance. The materials for this comparison are set out in the Table printed at the end of this chapter, based in part on published figures and in part on material supplied specially by the Ministry of Labour (p. 354).

The figures deal separately with four main industries —building, engineering, shipbuilding, and printing and bookbinding—containing among them nearly all the trade unionists included in the London returns. This separation of the industries is necessary, because inclusion of other industries, such as mining and textiles, in changing proportions in the returns for the country as a whole makes unsafe any comparisons based on general unemployment percentages before the war. Even when limited to particular trades the comparison made here should be treated as a comparison rather of movement than of absolute levels. "Shipbuilding" in London

is not the same as shipbuilding elsewhere; neither is building, nor printing nor engineering. In taking engineering and shipbuilding together for the early years we cannot help combining the two trades in proportions differing as between London and elsewhere. It is impossible to say, when the general insurance figures begin in 1921, whether unemployment in London is greater or less than elsewhere, either in proportion to the employable population or even to those in particular trades. What can be attempted is to trace historically how the industrial fortunes of London ebbed and flowed in relation to the rest of the country, and how unemployment alternately receded there or came into the foreground. As it happens, the figures for each of the separate industries lead to much the same conclusion, and show the same interesting reversals of fortune.

Between 1887 and 1893 it may be assumed that London was affected by the movements of the trade cycle—that is to say, experienced a decline of unemployment up to 1889 or 1890, followed by a rise to 1893 or 1894. It is likely enough that this movement was less violent in London than elsewhere, and London would certainly escape lightly the effects of the mining stoppage of 1893. In that year the statistics of unemployment begin, and for the next ten years or so the London percentages for each main group—building, engineering and shipbuilding, and printing and bookbinding—are almost uniformly lower than those for the country as a whole. In the next dozen years or so, to the outbreak of the war, they are generally higher. The most important exception to this is found in the years of cyclical depression about 1908 and 1909, and in engineering and shipbuilding, the trades most affected by it. In building, and printing and bookbinding, which are both relatively less subject to the trade cycle and more subject to other forms of fluctuation, conditions in London, even about 1908 and 1909, though nearer to, are still a little worse than, those in the rest of the country.

After the war, the relative positions changed again, although for the first few years of the insurance statistics beginning in 1921, two of the selected industries—building, and printing, etc.—have higher unemployment percentages in London than elsewhere, while the other two—engineering and shipbuilding—have lower ones. But the general percentage of unemployment in London is, from the first, lower than the average for the country, and in the last few years each industry taken by itself is also better. Over the nine years 1921 to 1929 London shows an almost steady progressive improvement, bringing its general percentage[1] from 14·1 to 6·4, while in the country as a whole the percentage, after falling from the highest level of 16·9 in 1921 to 12·1 in 1923, has shown no definite tendency at all. (See Table I, p. 354.)

The period covered by the review thus falls into three main periods. First, after the cyclical fall and rise of unemployment about 1890, London in the "nineties" of last century was more prosperous than the rest of the country. Second, from the early years of this century to the outbreak of war, it was less prosperous, weighed down by the long-drawn depression of the building trade. Third, since the war, it has been relatively more prosperous again and has gained on most other districts year after year.

This is the background of facts of unemployment against which the measures taken to deal with unemployment at one time and another have now to be recorded.

The first of the three periods discerned in the history of London unemployment since Charles Booth's Survey is a period of unfixed responsibilities and sporadic action for its relief. The problem had not risen fully above the horizon of public consciousness. The cyclical decline of trade after 1890, though probably less felt in London than elsewhere, had the normal effect of calling atten-

[1] Insured males (men and boys).

tion to distress, in London as elsewhere. The starting of a scheme of decasualisation by the dock companies in 1891 was accompanied by a Mansion House appeal for the unemployed, directed or diverted to draining off the temporary surplus that would result from decasualisation.[1] The trifling sum raised by this appeal is one sign of the times; there was not in London sufficient fire of exceptional distress to produce much smoke of charitable relief. The response to a circular addressed by the Local Government Board to metropolitan vestries and boards of works in 1892, urging the hastening forward of useful work for the unemployed, and the opening of temporary registries, was another sign. Some of the vestries took action and others did not. In a number of cases the most enduring action was the opening of registries rather than the provision of relief. Some of these registries, it is true, were practically confined to registering men for work under the vestry, and none of them distinguished rigidly between relief work and other work. But some did set out quite definitely to find and fill vacancies with employers of all kinds. In this decade London became a pioneer of the movement for public labour exchanges, a position which it never lost.

At the time of the Board of Trade Report on Agencies and Methods for Dealing with the Unemployed, in 1893, six out of ten Labour Bureaux then regarded as more or less permanent were in London. Of these the bureaux at Battersea, Chelsea and St. Pancras were the most important, and with one break at 1902 (noticed below) continued to function till they were taken over by the Central (Unemployed) Body in 1906. Those at Camberwell, Hackney, and Westminster were, in practice if not in theory, confined to finding men for the vestry or for odd jobs. The vestries, however, in this matter had a more than parochial outlook. A conference of representatives of the metropolitan labour bureaux met in 1898 and prepared a scheme for a central exchange. This was followed a year later by a

[1] See *Unemployment: A Problem of Industry*, pp. 87–91.

conference attended by representatives from a majority of the vestries and district boards in London. The subject of this conference was "Labour Bureaux: their legal position, and how best to extend their efficiency and usefulness"; and the representatives, besides recommending all local authorities to establish such bureaux, asked the Board of Trade to set up a central labour exchange for London. Unfortunately, at the very time of this meeting the London bureaux were threatened with extinction. The London Government Act of 1889, replacing the vestries and boards of works by Borough Councils, brought the expenditure of the latter under a more stringent audit; it was ruled that the new local authorities could spend no money on labour bureaux, since they had no express statutory power to do so. One borough—Battersea—defied the ruling and its bureau continued to function; all the others were suspended for at least a year, till the position was regularised by the Labour Bureaux (London) Act of 1902.

This early drive in London towards organisation of the labour market is itself the best evidence that the problem of unemployment was not acute generally. Relief could be and was left to sporadic action, according to local exigencies and local policies. The worst year of the 'nineties, 1894, witnessed a good many disastrous experiments by Boards of Guardians in the opening of stone-yards, and in 1895 came a precursor of later revolts against stringent Poor Laws, when the St. Olave's Board of Guardians passed a resolution that every application to them "should be deemed to be one of sudden and urgent necessity" justifying outdoor relief. But the Select Committee of the House of Commons which investigated distress from want of employment and recorded those events at the time of the great frost of 1895, led to no permanent action. The trade cycle swung upwards once more and interest in unemployment petered out in London and elsewhere.

The beginning of the second period, with unemployment in London relatively worse than elsewhere, is

assigned by the Trade Union percentages to 1902 or 1903. This is definitely the beginning of a new movement led by London in relief of distress. The Mansion House Fund of 1903–4 led to the London Unemployed Fund of 1904–5 which supplied a model for the Unemployed Workmen Act of 1905. The first stage in all this was the publication on the 23rd November, 1903, of a letter signed by the Bishop of Stepney, Canon Barnett, and others, drawing attention to the prospect of acute distress and advocating a "colony" scheme of relief: work was to be offered at a distance from London to heads of families settled in London; the men would receive board, lodging and pocket-money, and their families would receive allowances governed by the number of children. This letter led to the reconstitution of the old Mansion House Committee of 1891–95, still formally in existence, and to the raising of a fund of about £4,000, spent in various "colony" experiments.

In 1904, with the building trade going steadily downhill, the prospect of distress grew, and at a conference of Metropolitan Guardians Mr. Walter Long, then President of the Local Government Board, took the decisive step of setting up the first public authorities for the specific purpose of dealing with unemployment. This new organisation—of joint committees of Borough Councils and Boards of Guardians, with a Central Committee—had no statutory authority, and its resources for relief came through a Mansion House Appeal realising just over £50,000; but its administrative expense was met, in fact, out of the rates, through the Metropolitan Common Poor Fund. It provided a model, followed closely in the Unemployed Workmen Act of the following year. The Joint Committees became Distress Committees; the Central Committee became the Central (Unemployed) Body for London, for five or six years a very active body indeed. Besides organising on a large scale relief works both of the ordinary type and on the "colony" principle of 1903, it acquired a farm

colony at Hollesley Bay, for training men to go back to the land in Britain or overseas, and it set up a system of Metropolitan Employment Exchanges, for the first time covering all London and working together, and for the first time wholly divorced from relief of the unemployed. Into this system were absorbed eleven municipal Bureaux already at work under the Act of 1902: the Metropolitan system was itself absorbed—almost the only going concern of its kind—in the national system of Labour Exchanges set up by the Board of Trade in 1909.

The scheme of 1904 was not confined to London, and still less was the Unemployed Workmen Act of 1905; the cyclical depression of 1908–9, as has been seen, affected the rest of the country more seriously than London and brought relief of unemployment into prominence. But from 1904 onwards to the outbreak of war it is fair to say that London was a leader in experiments for dealing with the unemployed, and was more continuously conscious of the problem than most great cities. This was natural, for the problem in London was more continuous than elsewhere—more a matter of chronic under-employment in the docks and hyper-cyclical depression in the building trade and other trades, and less one of exceptional distress. In the last year before the war, when the working of the limited insurance scheme under the Act of 1911 gave for the first time comprehensive statistics at least in the trades selected for insurance, London appears with a rate of unemployment in those trades twice that of the rest of the country. Elsewhere in 1913–14 there was a trade boom and prosperity; in London there was still 10 per cent. of unemployment in its largest industry, i.e. building.

The war, putting an end, after the opening flurry, to unemployment, practically suspended the work of the Central (Unemployed) Body for London. When after the short boom of 1920 unemployment returned catastrophically in 1921, the agencies for dealing with it were

revolutionised, and the passage from local to national treatment all but completed. Since the war, unemployment insurance had been made general, and since 1928 has become formally, as it was before then practically, the main agency for relief of unemployment however lasting. The organisation of work as distinct from relief by money grants has become a matter for direct action between a national Unemployment Grants Committee and the local authorities as employers. No room has been left for local unemployment authorities such as those under the Unemployed Workmen Act. The Act remained formally in force till the present year, but has been practically inoperative since the war. In London, from 1918 onwards, the Central (Unemployed) Body itself became unemployed but willing to work; and, mindful of its early vigour, with rejected letters and deputations, sought in vain from the national government the opportunity to render service; all that it was allowed to do was to maintain the Hollesley Bay Colony as a centre for a few men sent by Boards of Guardians. At last it has disappeared with the Guardians; the Unemployed Workmen Organisation (London) (Restriction) Order 1930 put an end to the Central Body and the Distress Committees, as from 1st April, 1930, and handed over Hollesley Bay and their other effects to the London County Council.

In the last of the three periods, since the war, London is simply the largest unit in a national problem and its treatment by national agencies. On the side of organisation, "London and South-Eastern" is one of the seven administrative divisions of Britain for Employment Exchanges and Unemployment Insurance, covering the Metropolis and all the Eastern and Home Counties. Within this administrative division a separation is made for statistical purposes. London proper with its 52 Exchanges and branch offices deals with an insured population (at July, 1929) of 2,214,000, or all but one-fifth of all in Britain. A point worth noting is that London is also the scene of the most closely co-ordinated

effort, as between the Ministry of Labour and the local education authority, to deal with the problem of juvenile employment.

The history of unemployment and unemployment measures in London in the generation separating the old and the new surveys, has been briefly outlined. It remains to put on record what unemployment in London means to-day. This is done in the three Tables on pp. 355–357, all relating to the year 1929 and showing London unemployment, first, in comparison with other districts and with the last year before the war, in respect of the trades then compulsorily insured; secondly, in its distribution between trades; thirdly, in its distribution by localities.

The trades insured compulsorily against unemployment under the Act of 1911 were building and construction of works; engineering, ironfounding and construction of vehicles; shipbuilding and saw-milling in connection with, or for the purpose of, any of these trades.[1] Tables IIA and IIB show the unemployment in each of the main administrative divisions in particular insured trades and in all of them in twelve months ending July, 1914, with figures for roughly corresponding divisions and groups of trades in 1929. The Table presents illuminating contrasts. In 1913–14 unemployment was highest in London, South-Eastern, and South-Western, and lowest in Wales, Scotland, and the North of England; in 1929 the order of the divisions is almost exactly reversed. In 1913–14 the mean unemployed percentage for all trades taken was 3·8, and in 1929 12·0 or about three times as much; but whereas in Wales, Scotland and the North it has risen five- or ten-fold, in London the percentage is the same—7·3—in both years. In building, unemployment in London in 1929 was at the pre-war level, and in engineering below it; only in shipbuilding was it materially worse. But in London shipbuilding is relatively unimportant. When allow-

[1] Manual workers only.

ance is made for the greater completeness of registration of unemployment since the war, it seems fair to say that in the selected trades of the 1911 scheme, taken as a whole, unemployment to-day [1] in London is no worse and may be better than it was in the last year before the war. In saying that it has to be remembered that 1913–14, though a year of prosperity in the country as a whole, was not so in London.

The foregoing comparison, to bring in the period before the war, had to be limited to selected trades. The next Table shows how in 1929 the total unemployment of London was distributed among all the trades now insured. Over thirty thousand of the 118,000 unemployed are in docks, public works and building, with unemployment percentages ranging from 24·0 to 9·4. In the rest of the insured population, including 719,000 women, the percentage averaged less than $4\frac{1}{2}$. Severe unemployment in London to-day is the unemployment of particular industries which have always been notorious for unemployment.

The last Table, giving the geographical distribution of London unemployment in June, 1929, shows the same result from another angle. Severe unemployment was confined to a few areas—West Ham, Bermondsey, Poplar, Stepney—all associated with the docks. More than a third of all the registered unemployed were found in seven out of the thirty-six boroughs included in the Table.

If, finally, the question is asked how the level of unemployment to-day in London compares with unemployment at the beginning of the Booth Survey, an answer can be given only in the broadest terms and as an impression rather than a certainty. For comparisons limited, as those already made have been limited, to the selected insured trades of the 1911 scheme and to one pre-war year—that of 1913–14—it has been possible to rely on statistics covering all the workmen concerned. Any attempt to compare unemployment to-day in Lon-

[1] See note at end of Chapter.

don with unemployment in the opening years of the Booth Survey, must rest on much less certain ground, because for those years only the trade union percentages are available. Even if it be assumed that in two of the three industries for which such percentages are available, that is engineering and shipbuilding, and printing and bookbinding, the trade unionists are a fair sample of all the workmen, no assumption of this kind can be made about building. In that industry, the trade union percentages before the war are drawn wholly from two occupations, the carpenters and joiners and the plumbers; they exclude bricklayers, painters, masons and the whole of the unskilled section of the industry. When the insurance scheme of 1911 was being prepared, it was assumed that so far from the carpenters, joiners and plumbers being a fair sample of the whole building trade, they represented only the most regular parts of it, and that the building trade as a whole was likely to have unemployment double of that which was recorded for these particular occupations.

If this assumption be adopted, the average for the unemployment of the three groups, engineering, shipbuilding, and printing and bookbinding, weighted by the total numbers occupied in each, works out at 6·5 for the years 1893–5, and 9·5 for the three years 1911–13, as compared with 7·4 for 1927–9.

If on the other hand the assumption be not adopted, and the percentages for the carpenters and joiners and plumbers alone are taken as applicable to the whole building trade before the War, the corresponding figures are 4·5 for 1893–5 and 5·8 for 1911–13 as compared again with 7·4 for 1927–9.

The truth probably lies somewhere between these two sets of figures. It is pretty certain that for 1911–13, it would not be justifiable to double the carpenters, joiners and plumbers' percentages to represent the whole of the building trade; for earlier years it might be. All that can be said is that, in the trades for which comparison can be attempted, unemployment to-day in

London is probably somewhat less and certainly not more than in the three years just before the war, and on the other hand, is somewhat but not very much higher than in the early days of the Booth Survey. In this connection it should be remembered that 1893–95 were years of cyclical trade depression, and the percentages from say 1896–1903, however calculated, would be lower.

The broad conclusion that emerges from all the figures collected here is that in London to-day unemployment is much the same in type and volume as it was a generation ago: a feature of particular industries and the normal product of particular industrial methods, not the passing consequence of depression.

[Note.—The statistics used for the purpose of this chapter end with the year 1929. At the time of going to press (August, 1930) the percentages of unemployment in London, as in the country generally, are materially higher than in 1929. As, however, the long-period statistical comparisons in the present volume are not as a rule carried beyond the year 1929, no alteration has been made in the text.—Editor.]

CHAPTER XI: TABLES

TABLE I

A. Unemployment Percentages in Trade Unions in London and in the United Kingdom, 1893 to 1914.

Year.	Building.		Engineering.		Shipbuilding.		Engineering and Shipbuilding.		Printing and Bookbinding.	
	London.	U.K.	London.	U.K.	London.	U.K.	London.	U.K.	London.	U.K.
1893	3·3 [1]	—	—	—	—	—	8·2 [1]	11·4	4·9 [1]	4·1
1894	4·2	4·1	—	—	—	—	7·5	11·2	5·3	5·7
1895	3·4	3·8	—	—	—	—	5·9	8·2	4·2	4·9
1896	1·6	1·8	—	—	—	—	2·7	4·2	3·7	4·3
1897	1·3	1·6	—	—	—	—	3·3 [2]	4·8	3·3	3·9
1898	1·0	1·3	—	3·8	—	4·7	3·8	4·0	3·5	3·7
1899	0·7	1·5	—	2·5	—	2·3	2·3	2·4	4·1	3·9
1900	2·0	2·5	—	2·8	—	2·5	2·1	2·6	4·2	4·2
1901	3·7	3·7	—	3·8	—	3·7	2·9	3·8	4·7	4·5
1902	4·9	4·2	—	5·1	—	8·2	5·0	5·5	4·4	4·6
1903	5·9	4·8	3·9	4·9	7·2	12·0	4·8 [4]	6·6 [4]	4·7	4·4
1904	8·1	7·6	4·6	7·0	10·0	14·0	6·0	8·4	4·8	4·7
1905	9·1 [3]	8·3 [3]	4·2	5·1	11·6	11·9	6·2	6·6	5·3	5·1
1906	8·9	7·2	3·1	3·0	9·7	7·6	4·9	4·1	4·9 [5]	4·5 [5]
1907	9·8	7·3	4·5	3·8	8·4	9·2	5·6	4·9	4·8	4·3
1908	13·0	11·5	6·8	10·3	12·2	23·2	8·2	12·5	6·0	5·5
1909	12·3	11·7	6·3	11·6	10·6	22·1	7·5	13·0	5·6	5·6
1910	8·2	8·6	2·9	5·8	6·7	13·2	3·9	6·8	5·0	4·9
1911	5·5	5·0	2·1	3·2	5·1	4·3	2·9	3·4	6·4	5·1
1912	5·9	4·2	2·4	3·0	7·8	3·9	3·9	3·6	6·7	5·2
1913	7·7	3·8	2·3	1·9	6·1	3·1	3·3	2·2	4·9	4·0
1914	9·6	4·0	3·8	3·1	6·8	3·0	4·5	3·3	4·9	4·5

B. Percentage of Insured Persons Unemployed in London (and Great Britain), 1921 to 1929.

Year.	Building.		Engineering.		Shipbuilding.		Printing.		All Insured Males.	
	London.	Gt. Bn.	London.	Gt. Bn.	London.	Gt. Bn.	London.	Gt. Bn.	London.	Gt. Bn.
1921	(19·1)	15·0	(23·6)	—	(30·5)	—	(8·9)	7·2	14·1	16·9 [6]
1922	(18·0)	16·8	(19·6)	—	(26·4)	—	(8·6)	7·2	13·2	16·3 [7]
1923	14·5	12·8	14·0	—	26·9	—	5·7	5·2	10·9	12·1
1924	12·3	10·6	10·4	15·2	26·5	29·4	5·5	5·8	9·8	11·1
1925	10·1	9·8	7·1	12·6	24·6	33·8	4·8	5·5	7·8	12·5
1926	9·9	10·9	7·4	15·7	24·6	34·7	5·2	5·1	7·7	13·6
1927	9·1	10·4	5·6	10·4	21·8	24·8	4·9	4·6	6·5	11·1
1928	8·9	12·4	4·3	9·8	21·9	26·5	4·3	4·2	6·3	12·4
1929	9·3	13·3	3·8	9·7	16·7	24·3	4·1	4·2	6·4	11·8

[1] For nine months only. [2] Excluding those on strike.

[3] Series continued by weighted average of (*a*) Carpenters and Joiners; (*b*) Plumbers.

[4] Series continued by weighted average of (*a*) Engineering; and (*b*) Shipbuilding.

[5] Series continued by weighted average of (*a*) Printers; (*b*) Bookbinders.

[6] Six months' average. Figures before 1923 are not strictly comparable with later figures owing to changes in classification.

[7] U.K., before 1923. [!] Figures in brackets relate to males only.

TABLE II.—UNEMPLOYMENT BY DISTRICTS BEFORE THE WAR AND IN 1929.

A. Percentage of Books Lodged: Mean for Year from 18th July, 1913–17th July, 1914.

Districts.	Building and Works Construction.	Engineering and Iron-founding, and Vehicles.[1]	Shipbuilding.	All Insured Workpeople.[2]
London	9·2	4·1	9·3	7·3
South-Eastern	4·8	2·7	3·3	4·0
South-Western	5·6	2·7	9·6	5·1
West Midlands	3·4	3·3	3·0	3·3
East Midlands	3·8	2·0	2·3	2·7
Yorkshire	3·3	2·7	2·5	2·7
North Western	3·6	3·2	3·3	3·3
North of England	2·7	3·6	2·3	2·4
Scotland	2·0	1·6	2·3	2·1
Wales	1·8	1·7	6·3	2·3
United Kingdom (incl. Ireland)	5·0	2·9	3·7	3·8

B. Unemployment among Insured Workers: Mean for Year 1929.

Districts.	Building.	Engineering (incl. Elect. Engg., Vehicles, etc.).	Shipbuilding.	Weighted[3] Average of 1, 2 and 3.	Total Insured Males. (All occupations).[4]
	(1)	(2)	(3)		
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
London	10·4	3·9	17·3	7·3	7·3
South-Eastern	7·2	4·0	8·3	6·2	6·5
South-Western	8·9	4·9	12·5	8·6	9·3
Midlands	12·7	7·5	15·5	9·1	10·2
North-Eastern	19·4	12·6	30·2	17·9	16·6
North-Western	18·7	10·9	25·1	15·1	15·7
Scotland	15·0	13·5	23·0	14·9	14·3
Wales	28·8	10·5	39·9	27·7	20·1
Great Britain (and N. Ireland)	13·3	8·8	24·3	12·4	12·0

[1] Figures weighted by estimated numbers of unemployment books current, for trades and districts, July, 1914.

[2] Including those employed in sawmilling, and occupations related to engineering, a small proportion of the total (about 3 per cent.).

[3] Weighted by estimated numbers insured, June, 1928.

[4] Average of January to June, 1929.

TABLE III.—Number of Insured Males, and Percentages Unemployed, in the most important London Industries, 1929.

London Division (=*Greater London*). (Men and Boys.)

Industry or Industrial Group.	Estimated Number of Insured Males.	Numbers of Insured Unemployed (Average).	Percentage Unemployed (Average, 1929).
Distributive trades	264,610	12,850	4·9
Transport other than docks, etc.	155,370	8,120	5·2
Docks, harbours, canals	46,460	11,170	24·0
Building	173,200	16,320	9·4
Public works contracting	24,190	2,730	11·3
General and constructional engineering	76,290	3,220	4·2
Vehicles construction	42,570	1,720	4·0
Shipbuilding and marine engineering	11,160	1,850	16·6
Iron and steel	2,790	260	9·3
Metal trades	33,790	1,480	4·4
Chemicals	36,400	1,360	3·7
Electrical trades (incl. electrical engineering)	40,130	1,580	3·9
Government, municipal and public utilities	98,250	4,260	4·3
Commercial and professional	60,130	2,470	4·2
Printing and publishing	72,390	2,990	4·1
Paper	11,710	450	3·8
Food, drink and tobacco	65,730	3,010	4·6
Personal Service	67,260	4,130	6·1
Clothing (incl. boots and shoes)	46,250	3,640	7·9
Textiles	6,630	380	5·7
Furniture	39,370	2,250	5·7
Miscellaneous household equipment[1]	10,690	620	5·8
Woodworking	16,030	1,010	6·2
Leather	11,850	900	8·4
Rubber	8,070	360	4·5
Glass	7,500	720	9·5
Building materials	7,270	450	7·2
Other Industries & Services[2]	57,690	6,390	11·1
Total Males	1,505,800	96,780	6·4
Total Females	718,590	21,200	3·0
Total All Workers	2,224,390	117,980	5·3

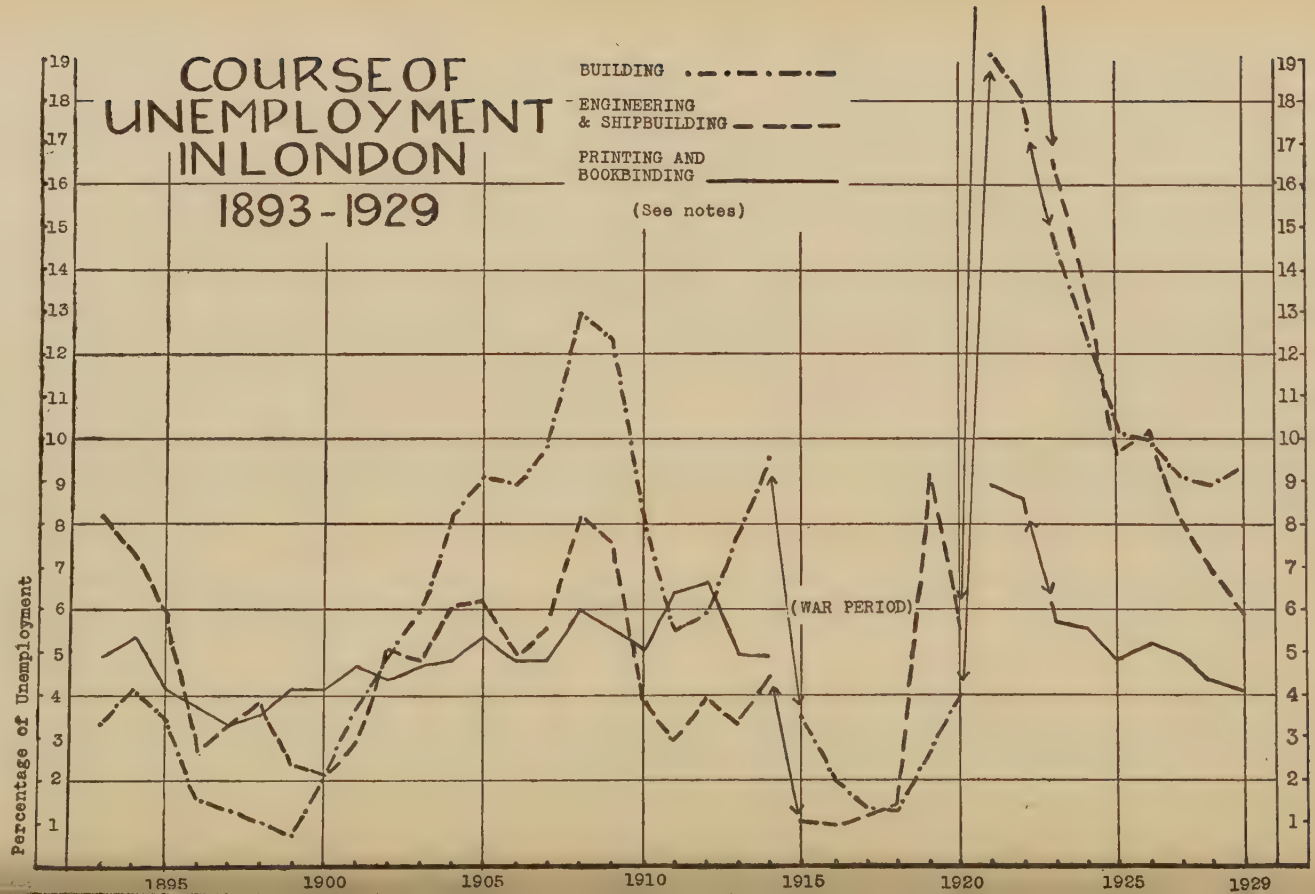
[1] Stoves and grates, wallpaper, linoleum, pottery, etc.

[2] Including instruments, toys and miscellaneous (including mining).

TABLE IV.—Distribution of Unemployment in London.
(Compiled from the Ministry of Labour's Local Unemployment Index.)
June, 1929.

Borough or District.	Estimated Number of Insured Persons.	Numbers *on Registers*, June, 1929.	B as a percentage of A.
	A.	B.	C.
Bermondsey	45,050	4,190	9·3
Poplar	59,700	5,190	8·7
Stepney	87,320	6,990	8·0
Shoreditch	39,190	2,900	7·4
Deptford	41,230	2,720	6·6
Bethnal Green	42,610	2,640	6·2
Southwark	71,540	4,430	6·2
Holborn	16,010	848	5·3
Finsbury	28,550	1,482	5·2
Islington	125,190	5,380	4·3
Woolwich	51,960	2,235	4·3
Hackney	80,870	3,395	4·2
City of London	5,570	234	4·2
Greenwich	34,810	1,392	4·0
Stoke Newington	18,380	735	4·0
Lambeth	111,660	4,130	3·7
Camberwell	94,640	3,500	3·7
Battersea	59,870	2,095	3·5
St. Pancras	79,350	2,700	3·4
Kensington	50,980	1,630	3·2
Fulham	56,210	1,740	3·1
Paddington	49,140	1,520	3·1
St. Marylebone	35,120	1,054	3·0
Chelsea	20,360	611	3·0
Hammersmith	52,690	1,422	2·7
Westminster	47,470	1,184	2·5
Lewisham	66,700	1,668	2·5
Wandsworth	118,470	2,370	2·0
Hampstead	25,030	405	1·6
Administrative County and City	1,615,670	71,100	4·4
West Ham	72,760	10,840	14·9
Tottenham	53,330	2,830	5·3
East Ham	35,770	1,860	5·2
Leyton } Walthamstow }	65,480	3,010	4·6
Acton	41,070	1,232	3·0
Willesden	41,640	1,166	2·8
Extra London Areas [1]	310,050	20,940	6·7
Survey Area [1]	1,927,720	92,040	4·8

[1] Excluding Hornsey and Barking, for which separate figures are not available.


COURSE OF UNEMPLOYMENT IN LONDON 1893-1929
BUILDING
ENGINEERING & SHIPBUILDING
PRINTING AND BOOKBINDING
(See notes)
(WAR PERIOD)
Percentage of Unemployment
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
1895 1900 1905 1910 1915 1920 1925 1929

CHAPTER XI: NOTES ON STATISTICS

Unemployment Percentages. Unemployment percentages for a varying number of trades, based on returns made by Trade Unions to the Board of Trade, and separated for London, were published monthly in the Board of Trade Labour Gazette from 1893 onwards. Although for a number of the earlier years they relate to a dozen or more Unions, a continuous series for the pre-war period is obtainable for only four main groups—building; engineering; shipbuilding and allied metal trades; printing and bookbinding;—and each of these called for some adjustment about the years 1903–6. The London figures for building were continued by the weighted [1] average for Carpenters and Joiners, and Plumbers; and the figures for engineering and shipbuilding, and for printing and bookbinding, were similarly combined. The separate figures for engineering and shipbuilding are given, because of their difference in magnitude, from the year of their appearance.

The general index for London for pre-war years, given below, was not based directly on the above data, though these are definitely its main constituents. A London index derived from the figures of "all unions making returns" was compiled for the Poor Law Commission, while the Labour Department supplied figures specially to the L.C.C. every month in continuation until 1914.[2] Throughout the series "all unions making returns" meant those groups enumerated above, with the addition of a few miscellaneous unions, if at any date there were such with London figures which could be included in the average. London figures for the separate industries, however, were not compiled for the L.C.C., and no records of them were kept. These figures had therefore to be separately calculated as stated above, the monthly figures being averaged to obtain the index for the year.

UNEMPLOYMENT IN LONDON, 1893–1914.
All London Unions making Returns.

Year.	Percentage.	Year.	Percentage.
1893	5·6	1904	6·6
1894	5·9	1905	6·4
1895	4·7	1906	5·6
1896	3·0	1907	6·1
1897	3·2	1908	8·3
1898	3·4	1909	7·2
1899	2·9	1910	5·0
1900	3·4	1911	4·6
1901	4·1	1912	5·0
1902	5·1	1913	4·1
1903	5·5	1914	4·9

[1] According to average Trade Union membership.

[2] See, e.g., *London Statistics*, 1913–14. These are the figures given immediately above.

War and Post-war Statistics. Percentages based on Trade Union returns are available monthly from 1914 onwards, but only for building, engineering, and shipbuilding, and only up to 1926. It was considered desirable, therefore, to use the figures derived from the administration of the Unemployment Insurance Acts, which besides bringing the position up-to-date, have the advantage that they give from 1921 onwards a general index of unemployment based on all London industries. Insurance figures (i.e. the percentages of books lodged, including "donation-policies" from November, 1918), relating to building, engineering, and shipbuilding in London were supplied specially by the Ministry of Labour to the L.C.C. during the years 1914 to (November) 1920, and these though not strictly comparable with later figures, are used as giving sufficient indication of the effect of the war on unemployment.

From 1921 onwards figures were calculated from data specially obtained from the Ministry of Labour. These are subject to the qualifications which apply to all Unemployment Insurance figures for this period, the chief of which is the change of industrial classification in 1923.

Yearly averages, deemed best for long period comparisons, were taken throughout, of monthly figures prior to 1921, of quarterly figures 1921–9.

Insured Persons by Industries. This Table was compiled from special information (estimated number of insured persons, and number of insured persons unemployed) supplied by the Ministry of Labour, the groupings shown being made from the 100 industries for which the data is classified.

Distribution of Unemployment in London. These figures were obtained from the Ministry of Labour's Local Unemployment Index, which now gives the estimated number of insured persons and numbers of registered unemployed by boroughs for the County of London (1929). Stratford and Canning Town together are taken as equivalent to West Ham, though part of Barking may be included.

Unemployment before the War and To-day. The figures of Table II A were obtained from official sources. Those of Table II B were compiled from the special industry reports published monthly in the Ministry of Labour Gazette.

CHAPTER XII

POOR LAW RELIEF

THE comparatively small space allotted to the Poor Law in Charles Booth's earlier volumes is not without significance. His treatment of the subject in these volumes [1] consist mainly of statistical tables of the residents in Poor Law Institutions, together with a detailed description of individual cases in the Poor Law Institutions of Stepney,[2] under the title of "a picture of pauperism."

The figures he quotes are in striking contrast with the figures to which post-war Poor Law statistics have accustomed us. He found in London 37,000 pauper adults in receipt of institutional relief, and added "the recipients of outdoor relief would be nearly as numerous."

In his "picture of pauperism" in Stepney he alludes again to out-relief and gives the following numbers for that parish:—

Year.	Indoor Poor.	Outdoor Poor.
1869	1,708	7,602
1890	1,823	177

This last figure (177) helps to explain the attitude of many of the social investigators of 1890 in regarding outdoor relief as a minor and dwindling branch of poor relief, which with good administration could be limited to the sick, old and infirm. Such an attitude seems strange to us, who, in 1930, find out-relief the most

[1] The third series (*Religious Influences*), published a good deal later, includes descriptions of the character of Poor Law administration in each large area.

[2] i.e. Stepney Poor Law Union, not the present borough (see Series II, Vol. IV, pp. 311–380).

conspicuous and the most stubborn factor in Public Assistance. A fuller explanation is therefore necessary, and it will also serve to introduce the history of the Poor Law during the period from 1890 to 1930 with which we are now concerned.

Before proceeding further it will be useful to state what the legal term "pauperism" means as distinct from the wider term of "poverty."

"Pauperism" is the condition of those poor persons who are receiving assistance from the Local Authorities administering the Poor Law Acts. The duty of these authorities is still stated in almost the same terms as were used in the Elizabethan Statute called the Poor Relief Act of 1601, viz. :—

(*a*) to set to work all such persons, whether married or unmarried, as have no means to maintain themselves, and use no ordinary and daily trade of life to get their living by;

(*b*) to provide such relief as may be necessary for the lame, impotent, old, blind and such other persons as are poor and not able to work;

(*c*) to set to work or put out as apprentices all children whose parents are not, in the opinion of the council, able to keep and maintain their children.[1]

Before a Local Authority can give any assistance under the Poor Law, they have to satisfy themselves that the applicant is destitute, and the assistance they may give to any person is limited to the relief of destitution.

A person may be poor in the ordinary sense of the word, and may be a conspicuously suitable case for help that will prevent him from reaching the lowest state of poverty, or will aid him to construct for himself a more secure position in life, but such preventive or constructive action has not always been regarded as falling within the scope of the Poor Law. Poor relief to a person who is not destitute is illegal, and when and where local administrators take a strict view of destitution the

[1] Cf. 43 Elizabeth c. 2, § 1.

functions of the Poor Law are narrowly limited. The definition of the word destitution may therefore be a very significant thing, and when the legal adviser to the Local Government Board gave evidence before the Royal Commission on the Poor Laws and Relief of Distress (1905–9) his definition of destitution was an important event. In fact, the vast changes in the administration of the Poor Law at present, compared with Charles Booth's time, may in one sense be described as the logical developments of this definition of destitution.

His statement was as follows :—

"Destitution, when used to describe the condition of a person as a subject for relief, implies that he is, for the time being, without material resources (1) directly available, and (2) appropriate for satisfying his physical needs (*a*) whether actually existing, or (*b*) likely to arise immediately. By physical needs in this definition are meant such needs as must be satisfied—(1) in order to maintain life, or (2) in order to obviate, mitigate, or remove causes endangering life, or likely to endanger life or impair health or bodily fitness for self-support."

For the bulk of the period, however, with which this chapter is concerned, it should be taken that the persons dealt with under the Poor Law were limited to the class known by the expressive name of "paupers."

Twenty years before Charles Booth made his Survey there had been a drastic change in the administration of the Poor Law. The year 1870 closed a decade which had seen a serious increase in pauperism throughout England and Wales. The rate per 10,000 rose from 413 in 1860 to 465 in 1870. The total number of persons relieved on January 1, 1871, excluding lunatics and casuals, was 1,033,894, and the number of outdoor poor included in this total was 888,876. These figures are not very much lower than the corresponding totals for the country in 1928, namely 1,438,506 relieved, including 1,212,553 outdoor poor. Having regard to the smaller population in 1870 the pauperism rate was, of course, proportionately much higher, namely 465 compared with 314 per 10,000 for January 1, 1929. The

persistence of these large numbers into the late 'sixties (the Cotton Famine was in 1863) was considered at the time to be due to the defective administration of the law,[1] and was made the object of what was called a Crusade. The Crusade effected within six years a reduction of nearly 30 per cent. in the cost of poor relief, and did much to re-establish the views of the Commissioners of 1834 on the evils of outdoor relief.

In London the returns made by Boards of Guardians show that for the years 1862 to 1890 the ratio of pauperism to the estimated population was smaller than in the remainder of the country, and that it was smaller in the years 1888 to 1890 than it had been in any of the preceding 28 years. In particular they show that the numbers in receipt of outdoor relief had steadily diminished during that period. Thus for the year 1871 the mean number of persons on outdoor relief in London was 116,555 or 36·2 per thousand of population, while in 1890 it was 48,755 or 11·2 per thousand of population. If the mean number of persons relieved in London had borne the same proportion to the estimated population in 1890 as it did in 1862, the number in the former year would have been 149,400 instead of 107,343.

Charles Booth therefore was writing on the condition of the poor of London at a date when the repression of outdoor relief had in many areas been successfully enforced after a long crisis, and had been strongly maintained for a dozen years. His contemporaries accordingly held it as a commonplace that the rate of outdoor relief was only safe and normal if it were below the rate of institutional relief. The diagram on p. 387 shows that Charles Booth was justified in accepting the view that poor relief was mainly institutional relief, and that this remained true until (the shape of the diagram suggests the metaphor) the war exploded it sky-high.

The comparison between the rates of institutional relief and outdoor relief has in the past been regarded

[1] See Appendix No. 20 to the first report of the Local Government Board, dated March 27th, 1872.

as one of the most important questions affecting Poor Law administration. From one point of view it has been considered that when the rate of outdoor relief rises the law has been loosely administered, and that the destitute have been too freely relieved in their own homes. The other point of view has been that when the curve of institutional relief climbs above that of outdoor relief, the destitute are being unduly forced into the workhouse. These may in some cases have been proper conclusions to draw, but the course of the curves has mostly been the result of more complicated factors.

It is indeed only true to a small extent that the increase in indoor chargeability represents a transfer from outdoor to indoor relief. Some of the reasons for such increase are worth further description, for they touch very closely the daily life of the poorer working classes of London.

In the first place it should be noted that the legal poor, like all other Londoners, live longer than they used to do. As a result of a half-century of Public Health activities, the nation enjoys a higher survival age, and bears a heavier accumulation of aged and infirm persons. In the poorest classes many thousands of the old and infirm spend their last days in a Poor Law institution. Of the 41,737 adults in institutions provided by the Poor Law authorities of London on January 1, 1929, no fewer than 14,796, or more than a third, were over 65 years of age. In these circumstances the more old people there are, the more will be the demand for institutional relief. Nor is the percentage of old people who are remitted to the Poor Law declining. The circumstances of urban life which tend to weaken the ties of family life involve a reluctance to maintain the aged members of the family at home. Senile men and women who cannot keep themselves clean or adapt themselves to the circumstances of a young household, are not too unreadily sent to an institution, which no longer has the opprobrious name of Workhouse and offers a comfortable standard of life. The relatives who

are liable pay, and are glad to do so, for their difficulties with their old folk are not so much economic as social and personal. This applies much more to old men than to old women. It is a striking fact that the number of non-sick old men in institutions is more than twice the number of non-sick old women.

Another factor making for the increase of institutional relief, without effecting any corresponding reduction in outdoor relief, has been the rapidly growing use made of Poor Law hospitals. In Charles Booth's time the idea was still prevalent among Poor Law administrators, and was still accepted by social investigators, that whereas the able-bodied should be given institutional relief in a workhouse, the sick and infirm should and could be given medical and other relief in their own homes. This appeared to be more practicable then, and was possible at a much cheaper rate. Indeed the trend towards the expansion and elaboration of Poor Law hospitals has been comparatively recent.

The hospital treatment of illness is, of course, mainly a development of general medical practice, and the expansion of Poor Law hospitals is only part of a widespread expansion of clinical specialism. That the administrators of the Poor Law have kept abreast of this forward movement is a matter of which they are justly proud. In the skill of their medical officers, the elaboration of their hospital equipment and the high standard of their nurses, they have revolutionised the treatment of the destitute sick.

One test of the progress made in this branch of pauperism will occur to readers of Dickens and other opponents of the Poor Law Commissioners of 1834, viz.: the nursing of the sick, and it is interesting to enumerate the nurses in Poor Law institutions in England and Wales since Charles Booth's time :

Year.	Number of Nurses.
1883	2,385
1893	2,994
1903	5,674
1913	7,652

There are no later comparable figures available, but in London alone it is estimated that in 1929 there were approximately 5,000 nurses in the Guardians' hospitals and institutions, in addition to 4,500 in the institutions of the Metropolitan Asylums Board.

Concurrently with this enrichment of the facilities offered, there has been a greater readiness on the part of the poor to accept them. The expected reluctance to enter a first-class hospital because it is administered by a Poor Law authority has not been borne out by facts. Indeed the services of the Poor Law hospital have, in comparison with the General Public Hospital, certain obvious advantages. For example, admission is readily granted without delay to a hospital in the applicant's immediate locality. It is not necessary to arrange for admission at a distance, and on visiting days the hospital is near his home. In short, the Poor Law service is more accessible in a variety of ways and therefore often more acceptable.

Another illustration of the tendency during the last forty years to heighten the quality of what the Poor Law gives is to be found in the institutional relief given to children. In Charles Booth's time children of the destitute were maintained in "barrack" schools, except in the strictly limited classes of children eligible for boarding-out. To-day, however, the standard of efficiency in the schools and institutional homes provided for poor law children in London whether regarded from the educational or social aspect is generally high. And even in dealing with the ancient problem of vagrancy, the Metropolitan Asylums Board has brought up its casual wards to a standard of hygiene and humanity which is better than the independent wayfarer can find for himself.

Table IV, p. 386, relating to casuals, shows some striking variations in figures which do not correspond with the variations in the tables for institutional and domiciliary relief. There is a double explanation for this. First the vagrancy problem depends to some extent on provincial conditions as well as on the condition

of the casual labour market in London. Secondly the volume of vagrancy is peculiarly sensitive to administrative control, and the history of administrative control during the last forty years has included two outstanding events, viz.: the transfer of the casual wards in London to the Metropolitan Asylums Board in 1911, and the setting up in the same year of the Homeless Poor Advisory Committee and the Embankment Night Office managed by the Metropolitan Asylums Board, in conjunction with the Police.

The statistics available in connection with the homeless or casual poor in London afford no sure guide to the conditions as they existed prior to 1911, when the Casual Wards were transferred to the control of the Metropolitan Asylums Board. This is due (1) to the fact that there was no co-ordinated control—there being as many as twenty-eight Boards of Guardians having casual wards ; and (2) to the special circumstances of the Metropolis and the possible existence of a class who, seldom leaving London, habitually resort to the London wards—sometimes in one district, sometimes in another. Men in this class might appear as casuals in different districts on several nights in succession, so that it was not possible to get a complete picture of the houseless poor until the service came under central control.

The existence of this special class in London is illustrated by the conclusions of a Departmental Committee upon the report of a census taken on the night of February 10, 1928, in London and some provincial Unions, when the following interesting results were obtained.

	Country. Unions. Per cent.	London. Per cent.
1. Men undoubtedly seeking work . . .	22	12½
2. Temporarily unemployed, possibly seeking work	29	31½
3. Undoubtedly habitual casuals . . .	28	33
4. Probably habitual vagrants	21	23

The 2,582 casuals mentioned in this census would appear to fall, on their own statements, into the following age groups:

Below 21 years	3 per cent.
21 to 30 „	15 „
30 to 40 „	21 „
40 to 60 „	46 „
Over 60 „	15 „

The number of persons received into casual wards affords no index as to the number of homeless poor in London. A census of persons in the streets taken on the night of February 29, 1904, showed a total of 1,797. Six years later, on the night of February 18, 1910, the number was 2,747, an increase of 52 per cent. On this latter date there were 7,580 empty beds in common lodging-houses and 685 vacancies in casual wards.

This increase, as well as the fact that 2,747 persons were in the street instead of occupying available accommodation, is accounted for by the fact that at that time there was much indiscriminate distribution of food and other assistance to the houseless poor in London, particularly on the Embankment at night. Certain voluntary charitable agencies had at that time developed wholesale methods of supplying these people with meals, and the army of homeless persons, fostered by this method, reached such proportions that it was necessary in 1911 to take official measures to deal with it.

The Ministry of Health General Inspector for London formed an Advisory Committee, which consisted of representatives of the Metropolitan Asylums Board and members of London voluntary agencies. The latter organisations agreed to place beds at the disposal of the Committee, and the Metropolitan Asylums Board agreed to open an office on the Embankment where homeless people who had been furnished with tickets by the police might be referred, their needs investigated, and arrangements made for them to be sent to the particular voluntary agency or authority which was best suited to deal with them. These arrangements had the immediate effect of reducing the number of homeless poor on the Embankment.

Various measures were also adopted by the Board to ameliorate the lot of those who were found after these sifting processes to be helpable cases, or persons deserving consideration, and in 1923 one of the casual wards was set aside as a hostel to accommodate selected cases from the casual wards under conditions as to dietary, sleeping accommodation and leave which were much more favourable than those necessary in a casual ward. The recipients were given substantial help in finding work and the following figures for the end of 1929 show the results which have been obtained from the difficult cases of destitution that pass through the Hostel:

Admissions.		Discharges.	
From Casual Wards	536	To situations	200
„ Night Office	42	To Voluntary Agencies	90
Re-admitted from Infirmary	8	Sent home or to relations and friends	21
		Permitted to leave—at own request	43
		Failed to return from seeking work	127
		Discharged	80
		Infirmary	20
		To draw Unemployment Insurance	4
Total Admissions	586	Total Discharges	585

Other arrangements were made for elderly casuals to be accommodated in the Institutions belonging to Boards of Guardians and some other vagrants were transferred to the London Industrial Colony near Sutton, Surrey, where there were opportunities of learning trades and entering a regular industrial life.

As a result of the measures referred to in the preceding paragraphs the census of persons in the streets taken on the night of February 14, 1930, showed that only 79 homeless persons were found in the streets, whilst there were 1,807 empty beds in common lodging-houses and 98 vacancies in casual wards.

It is now time to turn to the other curve on the diagram and to consider the changes during the last forty years in outdoor "pauperism." It has already been pointed out that in Charles Booth's time out-relief in many districts was mainly confined to the old and the sick, and was as inevitable as old age and sickness are. Similarly as no one becomes old or sick voluntarily, there was no likelihood of any startling changes in out-relief, and no need therefore to analyse it or prepare to write its history. The dangers of out-relief only arise when it is given to able-bodied men and women, and though it was recognised that the maintenance of a strict policy was difficult and up-hill work, social reformers looked forward rather to the further restriction of out-relief than to its general extension to the able-bodied. This view continued unabated until the war and the figures set out in Table II on pp. 384–5 gave no grounds for doubt. The total number of persons in receipt of domiciliary relief in London actually fell from 56,000 in 1888 to less than 35,000 in 1913, in spite of the increase of population. In the intermediate years the total fluctuated with the state of trade, but in no year did it approach the figure for 1888. Indeed as late as 1909 the Royal Commission contemplated the disappearance of outdoor relief. In reviewing the period therefore between Charles Booth's Survey and our own, there is little to say until we come to the years after the war.

It is obvious that the post-war depression in industry in 1920 and 1921 presented a unique situation to all those concerned with the administration of the Poor Law in London. The acceptance of Poor Law relief is in some cases, so far as the recipient is concerned, a moral question as well as an economic question, and the policy of Poor Law relief has also varied according to moral opinion as well as economic considerations. It is necessary to make these remarks because the outburst of public assistance in the form of monetary grants after the war was mainly conditioned by the character of the nation after the strain and stress of its great military

conflict, and as a consequence of the acute industrial situation.

The out-of-work donations given by the Government immediately after the war would in any case have been fatal to any plans that experienced Poor Law administrators might have tried to operate for keeping within limits the immense demand for outdoor relief. No such plans, however, were in fact possible at the height of the crisis, and the abandonment of the old rules and regulations was almost complete in the industrial parts of London, not only in 1921, but for several years afterwards. The abandonment during this period of the essential considerations upon which Poor Law relief had previously been granted will be recorded as the most important feature of a history of public assistance in this generation.

The tendency of Poor Law administrators to offer advantageous terms in the provision of institutional relief has been noted above, and the effect of that tendency has been related to the normal development of the life of the community as a whole. But what can be said of the same tendency in giving outdoor relief to the able-bodied ?

In the first place the differing degrees in which this policy has been applied in the different parts of London can be seen from the table on the opposite page, which gives the figures for January 1, 1929.

The economic circumstances of the respective boroughs of the Metropolis show no close connection between poverty and the measure of pauperism which these figures disclose. There is no ground for believing that those who have administered the Poor Law in the poor areas included in the north, west and south-west areas of London have failed to give adequate relief to destitute persons. On the other hand it is to be doubted whether the policy of almost unrestricted out-relief has achieved even the object which those who favoured it had in view (i.e. that of " raising by hook or crook the standard of life of . . . households . . . which fell below what was assumed to be the prescribed minimum of national

Names of the Poor Law Unions in London.	Number in receipt of Relief per 10,000 of Population, Jan. 1st, 1929.			
	Institutional Relief.	Domiciliary Relief.		Totals.
		Not on account of Unemployment.	On account of Unemployment.	
Administrative County of London.				
West District:				
Paddington	132	81	21	234
Kensington	148	8	0	156
Hammersmith	133	150	33	316
Fulham	129	81	5	215
Chelsea	203	56	7	266
City of Westminster	217	30	0	247
North District:				
St. Marylebone	200	53	26	279
Hampstead	90	27	2	119
St. Pancras	201	159	76	436
Islington	137	117	21	275
Hackney	132	92	109	333
Central District:				
Holborn	251	141	64	456
City of London	268	62	15	345
East District:				
Shoreditch	185	290	340	815
Bethnal Green	192	279	391	862
Stepney	209	311	254	774
Poplar Borough	220	679	423	1,322
South District:				
Southwark	245	276	181	702
Bermondsey	216	512	411	1,139
Lambeth	162	126	21	309
Wandsworth	94	88	17	199
Camberwell	147	224	41	412
Greenwich	173	272	311	756
Lewisham	83	119	44	246
Woolwich	113	259	158	530

civilised life" [1]), while many individual cases of abuse are to be found in the reports of the Ministry of Health for this period.

The Poor Law Commission of 1834 was concerned to abolish the abuse resulting from the issue of relief in aid of wages, but in London during the period under review relief was given not only in aid of wages but also in lieu of wages. Cases were found in which the amount of relief afforded under scales has been in excess of the earning capacity of the individual, or even in excess of the current rate of wages in his particular occupation, with the consequence that being placed on relief under the scale, the recipient has continued to receive relief, there being no inducement to find employment. In other cases the margin between the amount of the relief and the possible amount of earnings has been so small that the recipient has felt that he need not work for the difference. But there is a further and more striking element in the post-war position. This is the practice of granting relief in aid of State benefits—a practice in some ways analogous to the old method of relief in aid of wages. This new practice has been prevalent in some places and is just as elusive as the former practice.

One feature of the strain put upon the administration of the Poor Law by the enormous number of persons relieved was the widespread adoption of scales of relief, and the claim on the part of the instructed applicants that they should be maintained up to the standard of living set by this scale. The most familiar example of this Scale of Relief is that set out in Statutory Rules and Orders 1922 (No. 3) whereby the Minister of Health (Sir Alfred Mond) provided that no repayment should be made out of the Metropolitan Common Poor Fund in respect of so much of the outdoor relief granted in any case by Guardians as would raise the weekly income of the applicant or of the household beyond a sum less by ten shillings a week than the standard rate of wages for the

[1] Sidney and Beatrice Webb, *English Poor Law History*, Part II, Vol. II, p. 903.

time being, or was in excess of the scale set out in the following schedule (sometimes known as the Mond Scale):

	Not exceeding s.	d.	
For man and wife or two adults living together . .	25	0	a week.
For children under 16—			
For a first child	6	0	„
For a second or third child	5	0	„
For a fourth or any subsequent child . .	4	0	„
For an adult living with parents or relatives . .	10	0	„
For an adult not so living	15	0	„

Fuel up to 1 cwt. a week in winter or ½ cwt. in summer, or its equivalent in money (not exceeding 3*s.* in winter and 1*s.* 6*d.* in summer) may be granted in addition to the above amounts.

It will be observed from a close examination of the Order that the scale regulated the charges to be made on the Fund, and did not in so many words purport to define the amounts necessary to maintain destitute people in a proper state of health and working fitness. The scale was, however, used for this purpose in the actual ordering of outdoor relief, and although the cost of living fell by 17 points between 1922 and 1927 there were still some Boards of Guardians in London who were using the scale as their daily guide in ordering outdoor relief. The result was that there were cases where families were receiving more in relief than could be earned by unskilled labourers who were maintaining themselves and their families independently of public assistance.

The extent of the Poor Law relief of the able-bodied unemployed of London can be measured in a striking way by noting the reduction that resulted from the restrictions that began to be imposed in 1927. This can be studied in a series of White Papers [1] which have not perhaps received the attention that they merit. These papers show that in the year June, 1927–June, 1928, the number of able-bodied persons relieved on account of unemployment was reduced in the County of London by 43 per cent. Owing to the comparatively favourable position of the metropolis as a labour market, this drastic reduction of pauperism was made without any apparent

[1] Command Papers Nos. 3006, 3218, 3433, i.e. the H 240 Returns.

mal-adjustments. Certainly it did not involve an increase in the number of institutional poor. In 1928–29 the number of unemployed persons in receipt of domiciliary relief was further reduced by 37·5 per cent., the total result being a reduction of two-thirds in two years. An interesting comparison can be made by these Papers between West Ham and the three London areas of Poplar, Bermondsey and Bethnal Green, which form a group that, during the greater part of the two years under review, were among the five Unions in England and Wales with the highest proportion of the population on unemployed domiciliary relief. These three London areas were subject to the most extreme form of the policy of maintaining the able-bodied unemployed on unconditional outdoor relief, and the following table compares their rectification with that of West Ham, which began a year earlier :

UNEMPLOYED PERSONS ON RELIEF.

West Ham.		Three London Unions.	
June, 1926.	15,325		
June, 1927.	5,603	June, 1927	9,785
May 26, 1928	2,806	June, 1928	5,104
June, 1929.	1,046	June, 1929	2,727

It has been necessary to describe the outstanding features of out-relief administration at the time of the present Survey, in order to draw attention to a fundamental change in the attitude of mind of the poor of London to-day compared with that of Charles Booth's time.

At the time of the appearance of "Life and Labour" there was an assurance of social stability which had been growing steadily for several years, and continued up to the time of the outbreak of war. The number of those in receipt of relief had consistently declined since 1870, convictions for drunkenness and for other petty offences had also decreased, whilst the standard of life and health had steadily improved. Wages were higher than formerly, whilst the cost of living appeared to be lower. Whilst extreme poverty was to be found in certain

localities and occasional labour troubles occurred, these appeared to be little more than the give and take of economic adjustment.

One would judge that in Charles Booth's time the normal life and conditions of the poorer classes of London were generally regarded as being substantially unaffected by the Poor Law. Influences affecting the daily life of a family were analysed without according much importance to the existence of the Guardians and their services; in other words, the Poor Law was regarded as a last resort, and any person who fell into the Poor Law was thought of as joining a separate class, and as losing all links with the normal life of the poor. If he escaped from the Poor Law he again became an object of interest, but the class of "paupers" as such were treated in Charles Booth's Survey as a residue, which might or might not ultimately disappear, but was to be written off from the books of the community's industrial and social assets.

The public attitude to poverty to-day is greatly changed. In the first place the numbers of recipients of relief are so much greater, both absolutely and as a proportion of the population, that they cannot be regarded as a separate class, or as abnormal cases.

On January 1, 1929, there were 197,660 persons in receipt of relief in London Unions, compared with 117,143 on January 1, 1888. The average weekly number of persons throughout the year 1928–29 was 181,105, equivalent to 405 per 10,000 of the population. The corresponding figure for the year 1887–8 was the mean number of 108,638, equivalent to 258 per 10,000 of the population. Even more striking is the difference in the character of the relief afforded; of the number quoted for January 1, 1929, 71,556 were in receipt of institutional relief and 126,104 were in receipt of domiciliary relief. On January 1, 1888, the corresponding numbers were 60,831 (institutional) and 56,312 (domiciliary). Thus the proportion, of rather less than a half for the latter class, which obtained in Charles Booth's time has changed into a proportion of

nearly two-thirds. If allowance be made for the increase of population, practically the whole of the higher incidence of poor relief is accounted for by the extension of domiciliary relief.

It would seem that recourse is now had to Poor Law relief just as to other forms of social assistance, and that a person no longer feels that in applying to the relieving officer he is crossing the Rubicon.

This is all the more remarkable because of the vast extensions of the other forms of public assistance that have developed since Charles Booth's time. A mere list of these public benefits is impressive. They include Old Age Pensions, National Health Insurance, Unemployment Insurance, War Pensions, Widows' and Orphans' Pensions, Maternity and Child Welfare services, Public Health services such as those for tuberculosis and venereal disease, Acts for the State assistance of the blind, and various free provisions associated with education, and we are coming more and more to realise that these rapid developments represent a fundamental change in the relation between the State and the individual. Individual lives are now controlled and cultivated under the direct intervention of a more elaborately organised community, and the Poor Law, instead of standing by itself as something essentially alien from the other factors of a citizen's life, is coming to be regarded as only one among similar collective activities.

The sanguine hope expressed at each successive stage of social amelioration by State action, that assistance under the Poor Law would be *pro tanto* successively reduced, is not yet realised, and the risk has developed that each provision of public assistance may stimulate the demand for it.

While therefore the expenditure on social services has very rapidly increased [1] the expenditure on Poor Law relief, as will be seen from the tables given below, has also steadily grown. One of the most striking instances

[1] According to the "Drage Return" (White Paper No. 101, 1929) this increase took place as follows (England and Wales): 1891, £20,125,331; 1901, £31,707,259; 1911, £55,260,872; 1921, £271,426,157; 1928, £322,689,403.

of this is to be found in the relation between Unemployment Insurance benefits and outdoor relief given on account of unemployment. When the Unemployment Insurance restricts uncovenanted benefits, it might be expected that the number of men driven to apply for Poor Law relief would increase, and vice versa that when Unemployment Insurance benefit is increased, the Poor Law authorities would have fewer demands made on them. The same circumstances, however, which cause further demands on the Unemployment Insurance Fund also impel a larger number of persons to apply for that supplementary assistance which the Fund does not allow, and which the Poor Law authorities have in recent times found it necessary to give.

The principle of "deterrence" which was accepted without question by the majority of Charles Booth's contemporaries, and continued as a substantial consideration in the administration of relief until the end of the war, is now less openly proclaimed, if not forgotten. Thus large numbers of people in the industrial quarters of London have come to regard the Poor Law as one social service among many, which specialises in certain more personal domestic benefits, is readily available, and appears to them no less honourable than the various health, education and insurance services—something to which they feel themselves equally entitled, and in particular, something to which they may turn when the benefits to be provided by those other services fall short of their needs.

This attitude of mind is in another respect very different from that of forty years ago, viz., in the view that the poor take of private charity and in the part taken by charity in the relief of poverty. From Charles Booth's time right up to the Royal Commission of 1909 the rôle of private charity was regarded as highly important, and great emphasis was laid on the urgent necessity of promoting co-operation and preventing overlapping between charity and public assistance.[1]

[1] See, for example, Charles Booth's concluding volume, pp. 142–150, for his final views on this point.

It would be of great interest to ascertain how far the great increase in the amount of public assistance rendered through the Poor Law has been accompanied by a decline of private charity or an alteration in its channels. There can be no doubt that the forms in which private benevolence manifests itself have considerably changed. More support is given to medical and social institutions and various forms of organised effort, and less and less goes in promiscuous almsgiving, the dangers of which were already recognised in Charles Booth's time. But it is impossible to discuss these changes satisfactorily in sole relation to the growth of public assistance, and without reference to the even more important development of social services, such as pensions and insurance. While it is evident that the line of demarcation between public and private effort has shifted, there is nothing to indicate that the need of mutual co-operation has diminished, though the form and character of that co-operation may have been modified.

On the whole the history of Poor Law administration in London during the last forty years may not unfairly be described as one of continuous development and improvement. In its provision for the sick, for other disabled and abnormal persons, and for children it has become more and more progressive and complicated and it has adjusted itself to the intense elaboration of social organisation to such an extent that it can now only be controlled by a specialised County administration such as is provided for in the Local Government Act, 1929. Even in the sphere of out-relief, forward improvements have been made in the direction of colonies and centres for training and instruction and assistance in finding employment.

Of the Poor Law administration in Charles Booth's time, it may be said that it varied widely in different parts of London, but generally speaking its most ample provision was the workhouse, and its most characteristic feature the desire to see the bulk of constructive humanitarian work accomplished by private charity.

The development from this period towards a centralised and uniform administration of Poor Law relief, as a social service fundamental in character, scientific in method, and constructive in purpose, is a transition which many will regard as in keeping with the needs of the modern State, so long as the fundamental principle that independence is better than reliance on public assistance is not obscured or impaired.

CHAPTER XII: TABLES

TABLE I.—Persons in Receipt of Institutional Relief in London Poor Law Areas, 1888–1929.[1] (January 1st.)

A. *Numbers.*

District.	1888.	1893.	1898.	1903.	1908.	1913.	1923.	1929.
West District:								
Paddington	1,003	906	1,093	1,732	2,121	2,422	1,792	1,917
Kensington	2,133	2,058	2,665	3,256	3,529	3,399	2,610	2,636
Hammersmith	1,363	1,805	2,059	1,292	1,593	1,786	1,487	1,817
Fulham				1,547	2,069	2,226	1,611	2,008
Chelsea	1,791	1,690	1,868	2,047	2,076	1,836	1,157	1,291
Westminster	4,686	5,135	5,149	6,040	5,583	5,518	3,650	2,876
Total	10,976	11,594	12,834	15,914	16,971	17,187	12,307	12,545
North District:								
St. Marylebone	3,158	3,163	3,358	4,031	4,117	3,733	2,072	2,074
Hampstead	374	360	405	546	752	790	723	776
St. Pancras	3,944	4,401	5,036	5,327	5,689	5,423	4,009	4,146
Islington	2,392	2,737	3,135	4,985	5,708	6,329	3,983	4,426
Hackney	2,259	2,485	2,790	4,395	5,058	4,873	3,451	3,530
Total	12,127	13,146	14,724	19,284	21,324	21,148	14,238	14,952
Central District:								
Holborn	5,615	4,879	4,761	6,139	5,882	5,385	3,128	2,800
City	1,776	1,333	1,350	1,315	1,161	957	436	314
Total	7,391	6,212	6,111	7,454	7,043	6,342	3,564	3,114
East District:								
Shoreditch	1,817	1,947	1,971	2,569	3,170	3,212	2,188	1,867
Bethnal Green	2,552	2,580	2,902	3,065	3,515	2,953	2,027	2,151
Stepney	5,332	5,432	5,651	7,311	8,309	7,765	4,992	5,123
Poplar	2,174	2,576	2,939	3,915	4,509	4,637	3,376	3,568
Total	11,875	12,535	13,463	16,860	19,503	18,567	12,583	12,709
South District:								
Southwark	3,986	3,833	4,288	5,435	6,171	6,067	4,388	4,438
Bermondsey	1,884	2,197	2,396	3,529	3,877	3,593	2,346	2,491
Lambeth	3,103	3,139	3,453	4,792	5,574	5,665	4,809	4,836
Wandsworth	1,792	2,210	2,766	4,654	5,757	6,203	4,657	4,808
Camberwell	2,208	2,779	2,688	3,791	4,970	5,012	3,733	3,836
Greenwich	2,540	2,829	2,930	3,216	3,776	3,606	3,051	3,285
Lewisham	848	963	978	1,509	1,781	1,788	1,908	1,933
Woolwich	1,124	1,254	1,315	1,745	2,146	1,968	1,496	1,529
Total	17,485	19,304	20,814	28,671	34,052	33,902	26,388	27,156
County of London: Total	59,854	62,691	67,946	88,183	98,893	97,146	69,080	70,738
Outer Unions:								
Edmonton	1,016	1,099	1,203	2,052	2,973	3,674	3,656	4,083
West Ham	1,448	1,615	2,064	4,704	5,210	7,738	6,173	6,687
Willesden[2]	—	—	270	664	1,165	1,380	1,362	1,509

[1] Excluding casuals. [2] Willesden became a separate Poor Law Parish in 1897.

TABLE I (*continued.*)

B. *Numbers per* 10,000 *of the Population.*

District.	1888.	1893.	1898.	1903.	1908.	1913.	1923.	1929.
West District:								
Paddington	87	66	77	120	148	169	125	134
Kensington	129	120	152	185	203	196	148	150
Hammersmith }	80	90	89	110	142	145	113	133
Fulham }				111	139	143	103	131
Chelsea	191	231	254	283	301	280	183	206
Westminster	230	259	273	338	334	353	263	220
Total	147	148	155	193	207	210	152	156
North District:								
St. Marylebone	216	223	246	309	335	323	199	202
Hampstead	61	51	52	67	89	92	85	91
St. Pancras	168	187	214	230	254	250	191	203
Islington	78	85	95	149	173	193	121	138
Hackney	104	99	106	162	186	179	127	133
Total	125	129	139	184	207	209	143	153
Central District:								
Holborn	300	281	288	393	408	403	268	256
City	427	375	448	524	537	520	335	283
Total	324	297	172	411	425	418	274	258
East District:								
Shoreditch	146	158	164	219	229	292	212	187
Bethnal Green	199	200	224	237	271	238	175	195
Stepney	187	189	192	248	291	289	201	211
Poplar	133	154	175	234	274	285	208	222
Total	169	177	189	238	281	276	198	207
South District:								
Southwark	199	188	209	267	317	319	239	248
Bermondsey	188	163	182	272	304	289	199	219
Lambeth	115	111	117	159	186	188	160	164
Wandsworth	64	64	74	112	126	129	93	94
Camberwell	100	116	107	146	191	191	141	149
Greenwich	164	166	163	174	204	193	156	155
Lewisham	98	96	80	106	109	99	94	96
Woolwich	113	112	106	134	167	153	109	104
Total	121	123	124	162	188	183	106	142
County of London : Total	146	146	153	195	219	215	154	160
Outer Unions:								
Edmonton	49	43	40	58	72	81	77	84
West Ham	46	38	44	78	81	109	83	88
Willesden	—	—	27	54	81	88	81	84

TABLE II.—Persons in Receipt of Domiciliary Relief[1] in London Poor Law Areas, 1888–1929. (January 1st.)

A. *Numbers.*

District.	1888.	1893.	1898.	1903.	1908.	1913.	1923.	1929.
West District:								
Paddington	612	532	533	334	691	416	4,412	1,476
Kensington	719	720	1,053	536	381	180	1,071	150
Hammersmith	917	906	1,489	625	1,209	917	3,788	2,489
Fulham				356	551	437	2,030	1,333
Chelsea	1,077	623	800	588	488	149	770	403
Westminster	1,839	1,669	1,809	1,326	996	578	1,193	403
Total	5,164	4,450	5,684	3,765	4,316	2,677	13,264	6,254
North District:								
St. Marylebone	1,414	1,009	850	448	497	264	1,388	827
Hampstead	237	297	316	199	164	122	405	245
St. Pancras	2,894	2,746	2,449	1,520	1,590	1,183	6,829	4,826
Islington	3,554	4,399	4,494	4,329	5,625	5,063	12,899	4,494
Hackney	4,575	3,508	4,026	3,350	3,175	2,064	8,010	5,404
Total	12,674	11,959	12,135	9,846	11,051	8,696	29,531	15,796
Central District:								
Holborn	4,752	3,024	3,037	2,534	2,212	1,239	3,168	2,278
City	2,066	1,408	1,056	507	294	94	57	90
Total	6,818	4,432	4,093	3,041	2,506	1,333	3,225	2,368
East District:								
Shoreditch	1,817	1,327	990	783	941	648	7,984	6,383
Bethnal Green	2,051	1,463	1,458	521	422	397	4,878	7,524
Stepney	1,765	2,582	2,613	1,765	2,257	1,914	13,111	13,806
Poplar	2,079	2,345	2,607	3,509	5,118	3,679	27,872	17,847
Total	7,712	7,717	7,668	6,578	8,738	6,638	53,845	45,560
South District:								
Southwark	3,012	1,631	2,683	1,595	2,369	1,923	9,619	8,285
Bermondsey	2,453	3,417	4,158	3,905	3,522	1,849	12,434	10,631
Lambeth	4,961	4,210	3,601	2,703	3,101	2,119	9,719	4,386
Wandsworth	2,471	3,250	3,281	2,436	2,404	1,654	15,949	5,373
Camberwell	2,348	3,852	4,845	5,321	4,773	3,819	12,623	6,894
Greenwich	4,739	2,286	2,621	3,073	2,550	1,691	17,723	11,080
Lewisham	2,260	2,377	1,713	1,916	1,789	1,355	9,382	3,821
Woolwich	1,700	1,495	1,242	720	1,475	972	8,762	5,656
Total	23,944	22,518	24,144	21,669	21,983	15,382	96,211	56,126
County of London : Total.	56,312	51,076	53,724	44,899	48,594	34,726	196,076	126,104
Outer Unions:								
Edmonton	2,273	1,492	2,526	2,608	3,643	3,006	20,139	12,221
West Ham	5,875	6,983	8,436	9,954	13,055	11,725	70,490	17,616
Willesden	—	—	909	1,009	1,275	1,003	6,404	2,294

[1] The figures in the tables relating to domiciliary relief include, in addition to persons directly relieved, others who were regarded as constructively relieved on account of relief granted to a dependant not in an institution.

TABLE II.—*continued.*

B. *Numbers per* 10,000 *of the Population.*

District.	1888.	1893.	1898.	1903.	1908.	1913.	1923.	1929.
West District:								
Paddington	53	39	37	23	48	29	307	103
Kensington	44	42	60	30	22	24	61	9
Hammersmith.	55	45	64	55	102	75	287	182
Fulham				25	37	28	129	87
Chelsea	115	85	109	81	71	23	121	64
Westminster	88	84	96	75	60	37	86	31
Total	69	57	70	46	53	33	165	78
North District:								
St. Marylebone	97	71	62	34	40	23	133	81
Hampstead	39	33	41	24	19	14	48	29
St. Pancras	123	117	104	66	71	55	325	236
Islington	115	136	136	130	171	154	396	142
Hackney	211	139	153	124	117	76	294	204
Total	131	117	115	94	107	85	296	160
Central District:								
Holborn	254	174	183	162	153	93	271	208
City	498	397	351	202	136	51	44	81
Total	298	212	209	168	151	88	248	196
East District:								
Shoreditch	146	108	82	67	83	59	774	640
Bethnal Green	160	113	113	40	32	32	422	681
Stepney	62	90	89	60	79	70	528	569
Poplar	127	142	155	209	311	227	1,719	1,109
Total	110	109	108	93	125	99	886	742
South District:								
Southwark	150	80	134	78	121	101	524	464
Bermondsey	180	254	315	301	276	148	1,052	934
Lambeth	185	149	122	90	104	70	323	149
Wandsworth	89	100	88	59	53	34	319	106
Camberwell	106	161	193	205	183	145	476	268
Greenwich	307	135	146	166	137	90	905	523
Lewisham	257	232	140	135	114	75	461	184
Woolwich	171	133	100	55	115	75	639	386
Total	165	143	144	123	121	118	506	293
County of London : Total	137	119	128	108	107	76	438	284
Outer Unions:								
Edmonton	109	58	83	73	88	66	424	252
West Ham	186	163	178	165	201	165	949	233
Willesden	—	—	92	81	89	64	379	128

See footnote, p. 384.

TABLE III.—Persons in Receipt of Relief in the County of London, 1875–1929.[3]

Per 10,000 *of the Population.*

Year.	Indoor Relief.[1]	Out-door Relief.[2]	Total.	Year.	Indoor Relief.	Out-door Relief.	Total.
1875	99	181	281	1900	145	88	233
1876	97	149	246	1901	142	86	227
1877	100	129	229	1902	145	90	235
1878	105	121	226	1903	149	95	244
1879	108	113	221	1904	155	93	248
1880	113	114	227	1905	161	105	265
1881	116	107	224	1906	166	108	275
1882	117	106	223	1907	167	99	266
1883	118	106	225	1908	170	103	272
1884	119	96	214	1909	173	104	277
1885	121	92	213	1910	174	99	272
1886	120	94	213	1911	173	94	267
1887	121	98	218	1912	168	72	240
1888	125	101	226	1913[3]	161	67	228
1889	141	97	238	1914	156	70	227
1890	140	92	232	[War period]	—	—	—
1891	136	90	226	1921	146	116	262
1892	135	83	218	1922	156	381	537
1893	138	86	223	1923	152	432	585
1894	144	92	236	1924	153	375	528
1895	146	90	236	1925	149	312	462
1896	148	92	240	1926	152	388	541
1897	146	92	237	1927	153	388	546
1898	145	88	233	1928	155	369	526
1899	146	87	234	1929	158	283	442

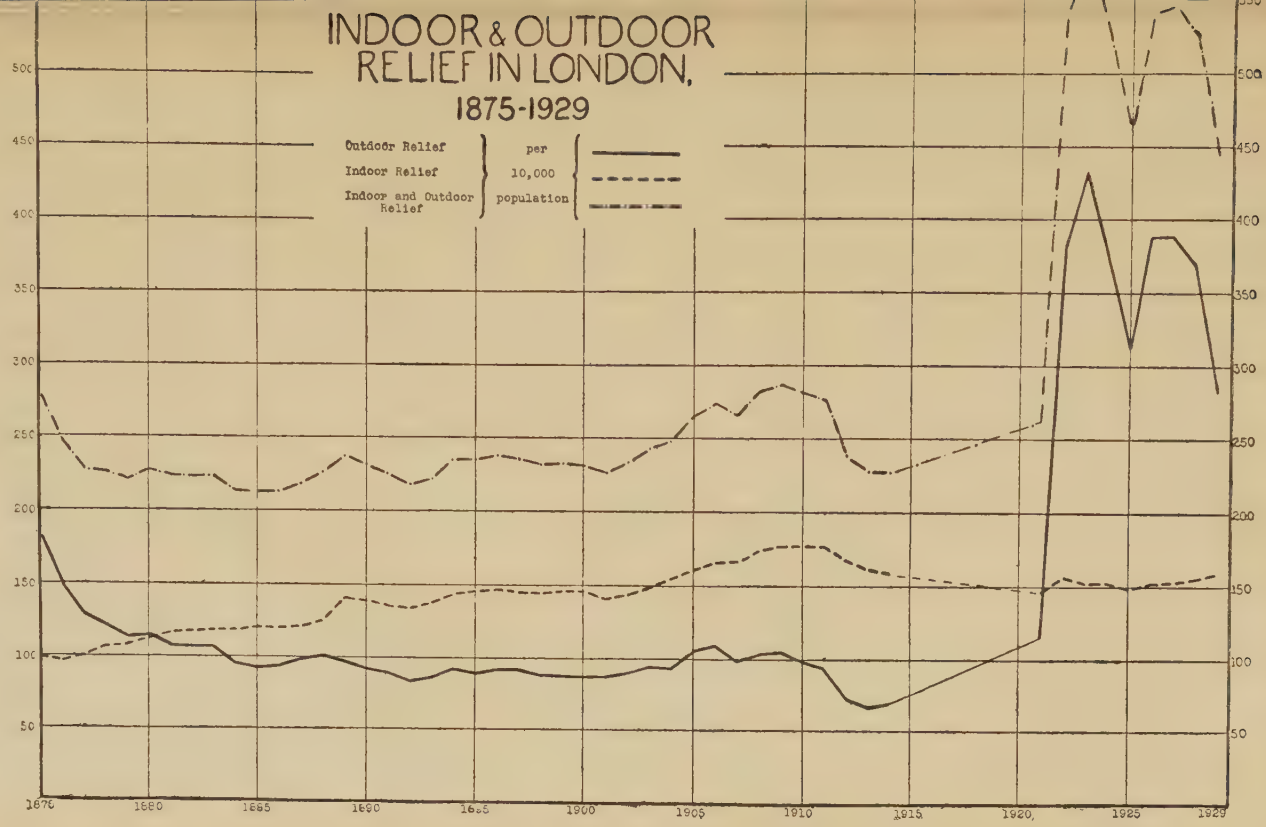
TABLE IV.—Casuals Relieved in the County of London (1st January), 1888–1929.

Year.	No.	Year.	No.	Year.	No.
1888	977	1908	1,726	1923	428
1893	782	1913	534	1928	910
1898	1,502	1918	88	1929	818
1903	1,507				

[1] Excluding casuals: except from 1875 to 1890; in the latter year the number of casuals was not large enough to affect the rate per 10,000.

[2] Excluding casuals and insane.

[3] Figures based on mean numbers in receipt of relief 1875–1912; figures for 1913 and 1914 from average of January and July; post-war figures, numbers in receipt of relief on January 1. All figures relate to the County of London.


INDOOR & OUTDOOR RELIEF IN LONDON, 1875-1929
Outdoor Relief
Indoor Relief
Indoor and Outdoor Relief
per 10,000 population
500
450
400
350
300
250
200
150
100
50
1870
1880
1885
1890
1895
1900
1905
1910
1915
1920
1925
1929

CHAPTER XII: NOTES ON STATISTICS

Tables I and II. These tables have been compiled from the Reports of the Local Government Board since 1887 (e.g. see C. 6745 of 1891, p. 398); and the figures per 10,000 population calculated on the basis of populations of the Poor Law Union Areas, interpolated from the figures given in the L.C.C. *Statistical Abstracts for London.*

Table III. These figures (which are used for the chart which accompanies this chapter) were compiled from the series of figures given in successive Local Government Reports, adjusted to avoid inconsistencies so far as was possible, and put on the *per* 10,000 basis as above. The meaning of the figures is further explained in the footnotes to the table, especially footnote 3 (which see).

Union Areas. In the County of London Borough and Poor Law areas are the same with the following exceptions.

(1) Woolwich Union takes in Charlton and Kidbrooke (Greenwich Borough). (2) Greenwich Union includes Deptford and the remainder of Greenwich Borough. (3) Lewisham Union includes Eltham (Woolwich Borough). (4) Holborn Union comprises the boroughs of Holborn and Finsbury together.

Outside the County, West Ham, East Ham, Leyton and Walthamstow come within the Union of West Ham; and Tottenham and Hornsey within the Union of Edmonton. Barking falls within Romford Union, and Acton within Brentford Union.

CHAPTER XIII

CRIME

The decrease or increase of crime over a period of years is of obvious importance in any attempt to estimate social progress or decadence, but it is not easy to arrive at any close measure of such decrease or increase. General impressions are of little use: if there occur one or two sensational cases of "cat-burglaries" or robberies effected by the use of the motor-car, the newspapers rush to the conclusion that burglary or robbery is on the increase, and the man in the street follows and believes that crime generally is increasing. The statistics of crime are the only safe guide, and even they require close examination and interpretation. The Home Office publishes annually a volume of Criminal Statistics which records the number of crimes reported or known to the police, of prosecutions, of convictions and of fines or imprisonments; but these figures may mislead unless they are studied in connection with changes in the law and in public sentiment towards crime and criminals. The proceedings of the courts are materially affected by the series of Acts which have relieved the work of the higher courts by extending the powers of the Courts of Summary Jurisdiction (Police Courts), and by the Acts which have enabled both higher and lower courts to substitute probation for conviction and imprisonment. There has also in recent time been a marked change of judicial practice in the direction of greater leniency, which makes it impossible to measure the number and gravity of offences by the number or length of the sentences imposed; while a similar leniency on the part

of the public may affect in some degree the number of prosecutions. The police returns of crimes committed, though less disturbed by these influences, are dependent to some extent on opinion as to whether a crime has or has not been committed, and it is always possible that even the most carefully drawn instructions may not secure complete uniformity in their mode of compilation.

In what follows and in the Tables in the Appendix the figures used are:

(*a*) In the case of the more serious offences, viz. those *triable on indictment* by Assizes or Quarter Sessions (though many of them are also triable by Courts of Summary Jurisdiction), the numbers of *offences committed so far as known to the police*. The police include in their returns all indictable offences reported or otherwise known to them, and by taking the numbers of offences so returned we avoid the difficulties arising from the numerous transfers of jurisdiction, as the character of the offence remains the same whether tried by the higher courts or by the Courts of Summary Jurisdiction or not tried at all. These are, moreover, the only published figures which show the local distribution of crime.

(*b*) In the case of minor offences (those not in the ordinary course triable on indictment but only by Courts of Summary Jurisdiction), the number of *persons charged*. There are in this case no returns of "offences committed": it would obviously be useless for the police to attempt to ascertain how many minor assaults have been committed, or how many persons have been drunk and incapable or have driven motor-cars at a dangerous speed.

The area for which figures are given is *Greater London*, that is, the City of London which has its own police force, and the Metropolitan Police District which includes the rest of the County of London, the whole of Middlesex

and the parishes of Herts, Essex, Kent and Surrey, lying within fifteen miles of Charing Cross. The years for which comparisons are made are 1893, when the criminal statistics were recast and fixed on the present basis, and 1928, the last year for which figures are available.

As the population of Greater London has increased by 35 per cent. between 1893 and 1928, the actual figures are not comparable, and the figures used throughout this chapter are those showing the proportion of offences to every million of population.

Taking first *crimes of violence to the person*, the figures of indictable offences show increase or decrease per million of population as follows:

Murder, decrease from 9 to 3.
Manslaughter, decrease from 6 to 3.
Wounding, increase from 50 to 58.
Other crimes of violence,[1] decrease from 29 to 8.

The increased figure under the head of wounding does not represent a real increase in crime. In 1893 Courts of Summary Jurisdiction had no power to try cases of malicious wounding, and in less serious cases there was a tendency to reduce the charge to one of assault and so avoid the delay and cost of committal for trial: but in 1926 these courts were given jurisdiction to try charges of malicious wounding and accordingly they now dispose finally of many such cases which are then classed under their proper head. Allowing for this change, there is clearly a substantial reduction in crimes of violence to the person known to the police, and the nature of these crimes is such that no appreciable number is likely to have escaped their knowledge. Though the figures given are those for single years, an examination of the statistics shows that averages for the years immediately before and after each date would give results that are not materially different. The returns for the whole of England and Wales also show similar reductions.

[1] Except rape, which is included among sexual crimes; and robbery with violence, which is treated as an offence against property.

If we turn to the minor offences which are tried only in Courts of Summary Jurisdiction we find a still greater fall in the number of assaults—from 4,098 to 1,028. On the other hand, the number of cases of cruelty to children appears to have increased from 33 to 40, but this increase is due to prosecutions by Education Authorities for the offence of permitting school children to be in a verminous condition—an offence created by the Children Act of 1908. The more serious cases of cruelty or neglect, prosecuted by the Society for the Prevention of Cruelty to Children, have fallen to a fraction of the number of those for 1893.

Taking next *crimes against property*, the following are the results for indictable offences:

Burglary and housebreaking	Decrease from	503	to 473	per million
Robbery and extortion	„	24	to 7	„ „
Aggravated larcenies	„	1,074	to 418	„ „
Minor larcenies	„	1,882	to 717	„ „
Receiving stolen goods	Increase from	44	to 50	„ „
Obtaining by false pretences	„	103	to 125	„ „
Other frauds	„	18	to 57	„ „

and for offences triable summarily:

Unlawful possession and stealing	Decrease from	412	to 78
Frequenting for unlawful purposes	„	289	to 212
Offences against Prevention of Crimes Act	„	20	to 11

On comparing these figures with those for the whole of England and Wales, two very marked differences have to be observed. While the number of burglaries and housebreakings in proportion to population has decreased in London, it has doubled in the country generally (261 to 556); and while the proportion of minor larcenies has fallen in London by nearly 60 per cent., the figure for the whole of the country is almost unaltered (1,884 to 1,902). So far as burglaries and housebreakings are concerned, the explanation is, in part at least, to be found in the use of the motor-car, which enables the London burglar readily to transfer the scene of his operations from London and other large towns

to the surrounding country, where less supervision is possible, escape by car is easier, and with its help more breakings can be accomplished in a short time. The following figures supplied by the Home Office [1] show the recent decrease per million of burglaries and housebreakings in the Metropolitan Police District and their increase in the Home Counties:

	1920.	1923.	1928.
Metropolitan Police District	534	474	458
Other parts of			
Essex	341	726	1,053
Herts	387	708	1,090
Surrey	250	351	896
Kent	281	377	743

One example may be given of the extra-mural activities of the London criminal. In one week in 1929 four youths from London in a car broke by night into 20 shops in Norfolk and Suffolk.

It must not therefore be inferred from the statistics that the number of London burglars has been reduced, or that the total number of persons addicted to this form of crime in England and Wales is on the increase.

While burglaries and larcenies are becoming fewer in London, certain special types of crime included under these heads show a large increase. Thus, in the Introduction by Mr. Locke to the Home Office Statistics for 1928 it is stated that between 1925 and 1928 the number (actual figures) of "smash and grab" raids on shops has increased from 135 to 230, and that of bag-snatching in the street from 66 to 127. These figures, though too small to affect the totals of the classes to which they belong, show the existence of backwaters, even when the general tide may be set towards improvement.

The reason just given for the reduction in the number of burglaries in London will not serve to explain why

[1] Thanks are due to Mr. Arthur Locke, C.B.E., and the Statistical Branch of the Home Office, for the figures given above and for valuable assistance on several other points. The Metropolitan Police have also given kind help in solving one or two questions.

minor larcenies are becoming fewer without any corresponding decrease in the rest of the country. While one cannot overlook a possibility that the Metropolitan returns of minor larcenies are in some directions defective,[1] there seems no reason to doubt that here, as under most of the other heads, there is a real improvement.

With the two exceptions just mentioned—burglary and housebreaking, and minor larcenies—all the figures for London are supported by comparable figures for England and Wales, and they seem on the whole to indicate some degree of improvement in the matter of honesty. The small increase in the number of cases of receiving stolen goods may be due to greater detective efficiency; and the more considerable increases in cases of obtaining by false pretences and other frauds are no doubt to be attributed, in whole or part, to the facilities for such practices which result from improved education. On the other hand, the diminution of cases of robbery, of "aggravated larcenies" (such as larceny from the person and embezzlement), and of charges of unlawful possession, must be regarded as significant.

In the case of *forgery* and uttering forged papers the proportion has increased only from 25 to 27, notwithstanding the introduction of the paper currency, while the figure for coining and uttering false coins has fallen from 28 to 6.

Under the head of *Malicious Injuries to Property* there is also improvement, indictable crimes having fallen from 13 to 1, and those punishable summarily from 468 to 114. Arson, which is included under this head, though it is sometimes a crime of dishonesty rather than of malice, shows a reduction from 4 to 1.

Sexual Crimes do not on the whole show similar improvement. It is true that rape and other offences against women and girls have fallen, according to the Metropolitan Police returns, from 48 to 34, a result

[1] The Metropolitan returns include figures supplied by the London Dock Police, a separate force under the Port of London Authority. The number of minor larcencies returned by them is surprisingly small.

that is the more remarkable when it is considered that incest, which was added to the Criminal Code in 1898, is now included, and that there has been a strengthening of the law with regard to girls under 16. In England and Wales generally the proportion has increased from 52 to 63. On the other hand, unnatural offences have increased from 9 to 12, and charges of indecent exposure from 22 to 36. Bigamy (which varies in character from rape by fraud or obtaining money by false pretences, to mere disregard by both parties of the marriage laws) has increased from 7 to 13 per million.

It remains to note some interesting changes in those police court offences which are classed in the statistics as "not akin to indictable offences." Offences against the Education Acts show, as might be expected, a great diminution—from 2,820 to 594 per million of population. Cases of drunkenness have dropped from 5,824 to 3,275, a large reduction, but less than that for the whole country, where the fall is from 5,681 to 1,551. Begging has fallen from 349 to 197 and "sleeping out" from 91 to 28. On the other hand, the offences of betting and gaming, which appear under two heads in the Tables, have increased from 528 to 648. Charges of soliciting by prostitutes numbered 134 in 1898 and 291 in 1928; but in this case the figures must be regarded as an index, not to the number of actual offences, but to the extent of police action, which has from time to time been curtailed by public outcry about alleged cases of mistaken arrest. In 1893 the effect of the Cass case in this direction was still being felt, while another case of the same sort had begun to show its influence in the figure for 1928 which is lower than that of 1926 or 1927. In the country generally, charges of soliciting decreased from 250 to 75. Finally, Highway Act offences in the Metropolitan area show an increase from 266 to 9,553, for which the coming of the motor-car is mainly or entirely responsible.

On a general view of these statistics it may be concluded with some certainty that in the interval

since 1893 the people of London have become much less inclined to acts of personal violence, and, with less confidence, that they are on the whole a little more honest; but that the standard of sexual morality is lower. There is much less drunkenness and the offences due to destitution such as "sleeping out" and begging, are fewer.

If we attempt to estimate the influences which have produced these changes it would be natural to ask first whether the war has had any effect. It might be expected that men who had been engaged for four years in killing Germans would come back with diminished regard for the sanctity of life and greater readiness to the use of violence. After the South African War there were some indications, not however very certain or extensive, of such an influence; but no such tendency can be traced as following the Great War. In the actual years of the war there was an appreciable decline in crimes of this class, due presumably to the absence of potential criminals in the fighting forces; but after the war the figures returned nearly to the same level as in 1913 and the gradual decline which had begun before the war was resumed and continued.

Again, in the case of offences against property, it might be suspected that the somewhat loose ideas of ownership which naturally prevailed among men at the front might after the war be carried into civilian life; but neither in Greater London nor in the rest of the country do the statistics support any such suggestion. In England and Wales generally the number of larcenies from 1919 to 1925 was less than in the years before the war, and it was only in 1926 that a sudden increase occurred.

The great decline in cases of drunkenness since 1913 is no doubt in large part an effect of the war, but an indirect one, due to the restriction of the hours of opening of public-houses and to the increased price and reduced strength of intoxicating drinks. The diminution of drunkenness may in its turn account to some extent for the reduction in the number of crimes of

violence, but it should be noted that the greater part of the reduction in the number of assaults occurred between 1893 and 1913, while in that period the number of charges of drunkenness increased substantially.

Among the causes of a more general character which may have influenced the number of crimes, account must be taken of the spread of education and of the improved conditions of life. So far as education is concerned we must look to the statistics of England and Wales rather than to those for London only. These are up to a certain point consistent with the view that better education means less dishonesty. From about 1880 till about 1905, years when the number of wholly illiterate persons was steadily decreasing, there is a steady and large reduction in the number of cases of larceny. After the latter date, illiteracy (as measured by the proportion of illiterate prisoners)[1] continues to decline down to the year 1922, but the decrease in cases of larceny is interrupted,[2] and some part, though not all, of what was gained in the earlier years of the period under review is lost in the later years: either the influence of elementary education and school life on the course of crime had exhausted itself or contrary influences had come into play. During the same period there has been a great increase in the number of cases of false pretences and other frauds, and this increase has been most marked in the later years.

Improvement in the conditions of life among the poorer classes must also have been exerting some effect

[1] The percentage of illiterate prisoners in English prisons was 22·2 in 1893, 18·8 in 1903, 13·3 in 1913, 8·6 in 1920, and 4·9 in 1922. Since 1922 the proportion has been between 4 and 5 per cent. (For the decline of general illiteracy in London, see Chapter VIII, especially Table II on page 262.)

[2] The following are figures of larceny per million of population in England and Wales—

1879–1883	average 3,146
1889–1893	„ 2,335
1899–1903	„ 1,865
1909–1913	„ 2,007
1919–1923	„ 1,820
1927,	2,120
1928,	2,141

in the period. In the later part of it particularly, with wages as measured by purchasing power higher in many industries (the "real wages" index figure for London taken at 100 in 1894 shows a rise to 113 in 1928) and with the benefits given by national health insurance, unemployment insurance and greatly increased rates of poor-law relief, it might be expected that there would be much less temptation to petty thefts. To these conditions we can attribute the great reductions in the number of cases of begging and "sleeping out" already noted; but their effect on the figures of larceny cannot be distinguished from year to year in the Tables. All we can say is that, if the influence of improved conditions of life has been considerable, it must have operated mainly in counteracting contrary influences; and among contrary influences of whose effect it is equally impossible to frame any definite estimate, we must reckon the weakening of the religious sanctions and the decline in parental authority.

It remains to notice some specific agencies which have operated since 1893 and which must have had some effect either in reducing crime or in preventing its increase. Industrial and reformatory schools, which had been in the second half of the nineteenth century powerful agencies in reducing the number of juvenile criminals, had probably reached by 1893 their maximum effect; but it is since that date that boys' clubs, boys' brigades and boy scouts' companies have provided healthy interests and amusements for boys and lads, as alternatives to loitering in the streets and acquiring the habits of the old "street arab." An experienced police magistrate believes that the bicycle, by providing a new activity and taking youths from London to the country, has helped to reduce the number of minor offences. For lads who have definitely fallen into criminal habits Borstal treatment has provided an alternative to ordinary imprisonment or penal servitude, and has been effective in rescuing from a criminal career about 60 per cent. of those committed to the Borstal Institutions.

Still more extensive has been the influence of the Probation system, since the Act of 1907 provided for placing offenders under the supervision and care of probation officers. The London Police Court Mission, for instance, has fifty-five missionaries who are appointed Probation Officers, in London by the Home Secretary and in Middlesex by the Justices. More than 2,000 offenders are every year placed by the Courts under their care instead of being sentenced to imprisonment, or to the fine which, on failure to pay, so often means imprisonment; and after they leave the court employment is found by the probation officers for more than 2,500 men, women and youths, including many who are not formally placed on probation. Apart from the personal influence of the officers, the finding of new employment for offenders who have lost their places and their characters must in the nature of things prevent many of them from committing fresh offences, as they could not fail to do if no other means of livelihood were left to them.

In the appendix to this chapter Tables are given which show for all the chief groups of offences the number per million of population not only in 1893 and 1928 but also in the intermediate years, 1903, 1913 and 1923. It will be seen that, allowing for occasional fluctuations, especially in smaller figures, the crime record for 1928 is the result of more or less continuous increase or decrease during the whole or the greater part of the intermediate period. Notes have been added explaining a few exceptional figures.

CHAPTER XIII: TABLES

CRIMES IN GREATER LONDON, 1893–1928.

Numbers per million of population.

TABLE I.—INDICTABLE OFFENCES.

H.O. Index No.	Offence.	1893.	1903.	1913.	1923.	1928.
1	Murder	9	7	7	6	3
2 & 3	Attempts and conspiracy to murder	3	2	4	3	2
4 & 4a	Manslaughter	6	3	5	3	3
5 & 8	Wounding	50	60	49	23	58[1]
6, 7, & 9–15	Other injuries to the person	26	15	8	13	6
16–18	Unnatural offences	9	8	14	11	12
19–25	Rape and other offences against females	48	33	47	30	34
26	Bigamy	7	8	6	18	13
27–33	Burglary, house-breaking, etc.	503	553	428	500	473
34–36	Robbery and extortion	24	16	8	6	7
37–43	Aggravated larcencies	1,074	787	578	383	418
44	Minor larcencies	1,882	1,407	996	779	717
45	Obtaining by false pretences	103	154	112	187	125
46–48 & 50	Other frauds	18	30	32	34	57
49	Receiving stolen goods	44	49	60	53	50
51–52	Arson	4	3	3	3	1
53–58	Other malicious injuries to property	13	13	11	1	1
59, 60	Forgery	25	25	31	22	27
61, 62	Coining and uttering false coin	28	8	8	4	6
70	Perjury	6	2	3	2	2
82	Suicide, attempting to commit	108	116	79	43	78
63–69, 71–81, 83	Other indictable offences	12	26[2]	36[2]	7	17
	Total	4,002	3,325	2,525	2,131	2,095

[1] This increase is probably due to the provision in the Criminal Justice Act, 1925, which enabled Courts of Summary Jurisdiction to deal summarily with the less serious cases of malicious wounding, with the result that some offences which would previously have been treated as assaults are now charged as cases of malicious wounding.

[2] These figures include cases of habitual drunkards repeatedly convicted and dealt with under the Inebriates Act, 1898. This procedure was abandoned when experience showed that prolonged detention of such drunkards had no remedial effect.

TABLE II.—Non-Indictable Offences akin to Indictable Offences.

H.O. Index No.	Offence.	1893.	1903.	1913.	1923.	1928.
85–87	Assaults	4,098	2,537	1,668	1,473	1,028
89 and 177	Brothel-keeping and living on prostitutes' earnings	24	95[1]	76	25	11
91	Cruelty to children . .	33	78[2]	76	65	40
109	Indecent exposure . .	22	25	30	32	36
129–133	Malicious damage . .	468	302	217	126	114
151–153	Prevention of Crimes Act, offences against . .	20	45	39	13	11
162–166 and 170	Stealing and unlawful possession	412	244	177	96	78
175–6	Frequenting, being found on enclosed premises .	289	256	186	191	212
	Total . . .	5,366	3,582	2,469	2,021	1,528

[1] This increase is mainly due to the passing of the Vagrancy Act, 1898, which made living on the earnings of a prostitute a criminal offence. The fall in the number of cases in 1923 and 1928 is probably to be accounted for by the reduction of the number of criminal aliens allowed to remain in this country.

[2] Increase due to the passing of the Prevention of Cruelty to Children Act, 1894.

TABLE III.—Other Non-Indictable Offences.

H.O. Index No.	Offence.	1893.	1903.	1913.	1923.	1928.
88	Betting and gaming (see also 174) .	56	64	244[1]	563	438
90	Cruelty to animals	606	719	823	398	201
94	Education Acts, offences against .	2,820	3,061	1,553	798	594
97–101	Game Laws, offences against .	37	21	7	6	3
102–106	Highway Acts, offences against	266	567	2,605	4,492	9,553
110, 111	Drunkenness . .	5,824	9,333	9,722	4,288	3,275
134	Merchant Shipping Acts, offences against . . .	9	14	9	7	15
135–137	Naval, Military and Air Force Laws, offences against	228	396	210	73	45
142–146	Police Regulations, offences against	3,031	5,031	3,212	1,860	1,749
147–150	Poor Law, offences against . .	310	431	259	148	113
154	Solicitation, etc., by prostitutes . .	134[2]	473	622	81[2]	291
155	Offences in relation to railways . .	150	141	152	140	154
156	Revenue Laws, offences against .	382	349	400	353	452
172	Begging (Vagrancy Act) . . .	349	517	707	224	197
173	Sleeping out (Vagrancy Act) .	91	73	67	40	28
174	Gaming, etc. (Vagrancy Act) .	472	413	340	270	210
178	Other vagrancy offences . .	82	8	15	14	7
	Other offences [3] .	2,697	2,303	1,252	1,194	1,183
	Total	17,544	23,914	22,199	14,949	18,510

[1] Increase due to the passing of the Street Betting Act, 1906.

[2] The number of charges under this head is subject to sudden reduction when public attention is directed to any alleged case of improper arrest.

[3] H.O. Index numbers 84, 92, 93, 95, 96, 107, 108, 112–118, 138–141, 157–161, 167–169, 171, 179–181.

CHAPTER XIII: NOTES ON STATISTICS

In the foregoing Tables criminal offences are classified under the 48 heads used in the Tables for Police Districts in the Home Office annual volumes of Criminal Statistics. The index numbers refer to the fuller classification in the general Tables for England and Wales. In Appendices A and B to each annual volume a full list is given of the separately defined offences, amounting to many hundreds, which are included under the several heads, and references are given to the statutes which create or define them.

The estimated populations of Greater London in the five years for which figures are given were:—

1893	5,823,325
1903	6,715,393
1913	7,411,885
1923	7,625,461
1928	7,864,130

APPENDICES TO VOLUME I

APPENDIX I

BRIEF SUMMARY OF CHARLES BOOTH'S DESCRIPTIONS OF HIS CLASSES

(In or About the Year 1889)

(Based on *Life and Labour in London*, 1st Series, Volume I, Chapter II.)

By the word "poor" I mean to describe those who have a sufficiently regular though bare income, such as 18*s*. to 21*s*. per week for a moderate family, and by "very poor" those who from any cause fall much below this standard (p. 33).

Class A. The lowest class of occasional labourers, street sellers, loafers, criminals and semi-criminals (p. 37).

Casual labourers of low character, those in a similar way of life who pick up a living without labour of any kind, inmates of common lodging-houses, and homeless outcasts.

Their life is the life of savages, with vicissitudes of extreme hardship and occasional excess. They render no useful service, they create no wealth, more often they destroy it. They degrade whatever they touch, and as individuals are perhaps incapable of improvement (p. 38).

Class B. Casual earnings—The very poor.

Widows or deserted women and their families bring a large contingent to this class.

The men are mostly casual labourers who do not, on the average, get as much as three days' work a week, but it is doubtful if many of them could or would work full time for long together if they had the opportunity. Many of them, from shiftlessness, helplessness, idleness or drink, are inevitably poor. The ideal of such persons is to work when they like and play when they like;

these it is who are rightly called the "leisure class" amongst the poor—leisure bounded very closely by the pressure of want but habitual to the extent of second nature.

Class B, and especially the "labour" part of it, is not one in which men are born and live and die, so much as a deposit of those who from mental, moral and physical reasons, are incapable of better work (pp. 42–4).

Class C. Intermittent earnings—The poor.

These are more than any others the victims of competition, and on them falls with particular severity the weight of recurrent depressions of trade. In this class are counted labourers who usually work by the job, or who are in or out of work according to the season or nature of their employment, together with a large contingent from the poorer artisans, street sellers and the poorer shops. They take things as they come; work when they can get work in their own line and otherwise go without, or, if actually hard up, try, almost hopelessly, for casual work. For the most part they are hardworking, struggling people, not worse morally than other people, though shiftless and improvident (pp. 44–8).

Class D. Small regular earnings—The poor.

This class includes those whose labour may be paid daily and at the casual rates, but whose position is pretty secure, and whose earnings, though varying a little from week to week, or from season to season, are in effect constant at not more than 21*s.* a week. None can be said to rise above poverty, unless by the earnings of the children, nor are many to be classed as very poor. What they have comes in fairly regularly and except in times of sickness in the family, actual want rarely presses, unless the wife drinks. As a general rule these men have a hard struggle to make ends meet, but they are, as a body, decent, steady men, paying their way and bringing up their children respectably. The work they do demands little skill or intelligence (pp. 49–50).

Class E. Regular standard earnings.

Contains the bulk of regularly employed labourers, earning 22*s.* to 40*s.* a week, and a large proportion of artisans. It also includes (as having equal means) the best class of street sellers and general dealers, a large proportion of the small shopkeepers, the best off among the home manufacturers, and some of the small employers (pp. 50–1).

Class F. Higher class labour, artisans, etc.

Consists of higher class labour (foremen, etc.) and the best paid of the artisans, together with many small manufacturers, small employers, dealers and small shopkeepers (pp. 51–60).

Class G. Lower middle-class.

Shopkeepers, and small employers, clerks, subordinate professional men (p. 60).

Class H. Upper middle-class.

The servant-keeping class (p. 60).

It is to be remembered that the dividing lines between all these classes are indistinct; each has, so to speak, a fringe of those who might be placed with the next division above or below; nor are the classes, as given, homogeneous by any means. Room may be found in each for many grades of social rank (p. 61).

Grouping the classes together, A, B, C and D are the classes in poverty, while E, F, G and H are the classes in comfort or even in affluence (p. 62).

(Charles Booth later somewhat simplified this classification, on lines which he defined in the Second Volume of the Poverty Series, p. 20.)

APPENDIX II

TABLE I.—Mental Deficiency, Lunacy, etc., in the County of London.

See Introduction, pp. 25–8.

Year (at Jan. 1st).	Number of Persons suffering from Mental Infirmity relieved through Poor Law.	*Ditto* per 10,000 of Population.	Number of all Certified Lunatics (Pauper, Criminal, and Private).	*Ditto* per 10,000 of Population.	Number of Children (ages 7–16 years) enumerated as Mentally Defective.	*Ditto* per 10,000 Children between same Age-limits.[1]
1902	21,856	48·2	24,971	55·1	2,451[2]	35[2]
1903	22,770	50·2	25,812	56·9	2,746[2]	40[2]
1904	23,609	51·9	26,739	58·6	3,119[2]	45[2]
1905	24,277	53·2	27,603	60·5	4,248[2]	62[2]
1906	24,617	53·9	27,988	61·3	4,909[2]	71[2]
1907	25,019	54·7	28,373	62·1	5,598	81
1908	25,413	55·7	28,796	63·2	6,097	88
1909	25,975	57·0	29,465	64·7	6,437	93
1910	26,043	57·3	29,606	65·2	7,161	104
1911	26,534	58·5	30,163	66·5	7,677	111
1912	27,010	59·7	30,672	67·8	7,921	115
1913	27,477	60·9	31,200	69·1	8,005	115
1914	27,860	61·5	31,447	69·6	8,131	116
[War period]						
1920	22,303	49·7	25,136	56·0	7,388	108
1921	23,436	52·3	25,599	57·1	—	—
1922	24,306	54·2	26,011	58·0	—	—
1923	24,273	53·9	25,934	57·5	7,129	112
1924	24,650	54·0	26,361	57·7	6,885	113
1925	24,387	53·3	26,251	57·3	6,648	108
1926	24,856	54·1	26,432	57·5	—	—
1927	25,709	55·7	26,667	57·8	5,804	96
1928	25,848	56·9	26,780	58·9	—	—
1929	26,434	58·6	27,430	60·9	—	—

[1] The percentage is calculated on the assumption that the number of children between the age-limits 7–16 years is roughly the same as the number of children between the age-limits 5–14 on the rolls of efficient schools. Since the latter is probably somewhat larger than the former number, the figure for the ratio per 10,000 may be slightly too low, but this does not affect their comparative value.

[2] In these years the enumeration of defective school children was incomplete.

TABLE II.—Admissions to all Institutions for the Insane, per 10,000 of the Population, 1890–1929.

(*England and Wales.*)

Average of Years.	Admissions per 10,000.	Average of Years.	Admissions per 10,000.
1890–92	5·73	1911–13	6·10
1893–95	5·99	1914–16	5·82
1896–98	6·09	1917–19	5·75
1899–1901	6·19	1920–22	6·01
1902–04	6·73	1923–25	5·70
1905–07	6·34	1926–28	5·57
1908–10	6·20	1929	5·57

TABLE III.—Number and Accommodation of Licensed Common Lodging Houses in London, 1889–1928.

(*County of London.*[1])

Year.	Number.	Accommodation.	Year.	Number.	Accommodation.
1889	988	33,964	1908	388	28,832
1890	962	33,947	1909	384	28,755
1891	863	33,086	1910	369	28,367
1892	752	30,283	1911	365	27,280
1893	671	28,340	1912	351	27,565
1894	654	29,827	1913	347	27,015
1895	626	29,574	1914	309	26,308[2]
1896	596	29,140	—	—	—
1897	581	28,718	1918	212	21,273
1898	560	28,332	1919	199	20,139[2]
1899	544	28,448	1920	187	19,218
1900	528	28,311	1921	182	18,503[2]
1901	514	28,037	1922	180	18,367
1902	491	28,970	1923	176	18,155
1903	470	28,893	1924	175	17,974
1904	454	28,970	1925	169	17,385
1905	415	27,471	1926	163	17,422
1906	403	28,516	1927	165	17,514
1907	396	29,104	1928	158	16,736

[1] Including City of London, except 1889–93.

[2] Excluding the accommodation of one licensed common lodging house in the City.

APPENDIX III

SUPPLEMENTARY TABLES TO CHAPTER X, LONDON OCCUPATIONS AND INDUSTRIES

(Detail of Tables IV, V, VI, VII and VIII, pp. 329–336.)

PAGE

TABLE A. Comparison of Occupations, 1891 and 1911 (Census Classification) 410

TABLE B. Comparison of Occupations, 1891 and 1911 (Charles Booth's Classification) 414

TABLE C. Comparison of Industries, 1911 and 1921 . . . 422

TABLE D. Comparison of Industries, 1923 and 1929 . . 424

TABLE E. Age Distribution by Occupations, 1891 and 1911 . 428

TABLE A(1).—Comparison of Occupations, 1891 and 1911:

Grouped according to Census Classification.

London and External Boroughs. By place of Residence.

(Detail of Table IV, p. 329.)

Males (in hundreds).

Occupational Group.	County of London, 1891.						External Boroughs, 1891.				County of London plus 4 Boroughs, 1891.
	North.	South.	East.	West.	Central.	Total.	West Ham.	Leyton.	Willesden.	Tottenham.	
Government	89	134	38	79	27	368	12	6	4	4	394
Defence	13	76	9	56	5	158	1	—	—	—	159
Professional	172	200	35	137	42	587	14	8	9	9	627
Domestic	58	63	19	148	32	319	3	1	3	2	328
Commercial	353	458	92	178	57	1,137	46	29	19	26	1,257
Transport	497	719	476	375	139	2,207	132	25	29	23	2,416
Agriculture, quarries	29	77	5	21	3	136	1	—	4	6	147
Metals and machines	145	344	164	87	48	788	80	12	11	10	901
Precious metals, watches	112	50	25	27	29	243	7	3	3	5	261
Building	316	481	149	264	55	1,265	63	19	30	29	1,406
Wood, furniture	147	121	187	53	33	541	13	5	4	7	570
Bricks, etc.	12	22	8	5	4	51	2	1	1	1	56
Chemicals	38	61	29	17	9	154	18	2	2	5	181
Skins and leather	28	75	25	13	10	152	2	1	1	2	158
Paper, printing	120	189	82	29	64	484	9	6	2	8	509
Textiles	72	76	42	39	25	255	9	3	3	3	273
Dress	166	174	252	112	48	751	14	7	6	7	785
Food, etc.: dealers and inns	299	448	229	228	103	1,307	55	17	15	20	1,414
General labour	116	397	195	113	44	865	80	8	10	14	977
Gas, water, sanitary service	13	39	15	16	3	86	14	1	1	1	103
All others	146	264	136	87	57	689	31	8	6	9	743
Total	2,942	4,468	2,212	2,084	837	12,543	606	162	163	191	13,665

Occupational Group.	County of London, 1911.						External Boroughs, 1911.		London and 10 Boroughs, 1911.
	North.	South.	East.	West.	Central.	Total.	Group 1.	Group 2.	
Government	133	280	40	118	23	595	84	45	724
Defence	16	84	8	63	2	172	7	3	182
Professional	176	280	35	177	28	696	80	61	837
Domestic	119	152	31	254	34	590	36	28	654
Commercial	372	653	88	223	39	1,375	285	155	1,815
Transport	536	979	472	384	91	2,461	480	156	3,097
Agriculture, quarries	19	52	5	16	2	94	22	11	127
Metals and machines	198	528	149	147	34	1,056	265	77	1,398
Precious metals, watches	119	78	27	31	18	272	44	21	337
Building	282	567	111	276	33	1,269	269	112	1,650
Wood, furniture	164	150	206	61	18	601	102	26	729
Bricks, etc.	13	24	9	3	3	52	10	2	64
Chemicals	45	100	39	21	6	211	86	11	308
Skins and leather	33	65	31	10	6	144	17	4	165
Paper, printing	130	236	82	35	34	517	101	22	640
Textiles	78	109	43	50	18	298	52	24	374
Dress	155	150	282	92	22	702	74	28	804
Food, etc., dealers and inns	350	615	220	300	71	1,555	260	86	1,901
General labour	67	203	89	61	17	436	81	18	535
Gas, water, electricity, sanitary service	28	86	23	28	3	168	44	11	223
All others	171	325	131	113	38	777	143	47	967
Total	3,204	5,716	2,121	2,463	540	14,043	2,544	947	17,534

North: Islington, Hackney, Stoke Newington, St. Pancras, St. Marylebone, Hampstead.
South: All Metropolitan boroughs south of the Thames.
East: Bethnal Green, Shoreditch, Poplar, Stepney.
West: Westminster, Paddington, Kensington, Chelsea, Fulham, Hammersmith. Central: City, Finsbury, Holborn.
Group 1: Barking, East Ham, West Ham, Leyton, Tottenham, Walthamstow. Group 2: Acton, Hornsey, Penge, Willesden.
In 1891 the Strand Registration District was included in the Central Group; in 1911 it is part of Westminster in the Western Group; about 86 (00) males and 43 (00) females were thus occupied in 1891.
Note.—Textiles and dress should be taken together when 1911 is compared with 1891.

TABLE A(2).—Comparison of Occupations, 1891 and 1911:

Grouped according to Census Classification.

London and External Boroughs: by Place of Residence.

Females (in hundreds).

Occupational Group.	County of London, 1891.						External Boroughs, 1891.				County of London and 4 Boroughs, 1891.
	North.	South.	East.	West.	Central.	Total.	West Ham.	Leyton.	Willesden.	Tottenham.	
Government	8	9	3	5	1	27	1	1	—	—	29
Defence	—	—	—	—	—	—	—	—	—	—	—
Professional	139	167	40	110	27	482	16	7	8	8	521
Domestic	827	974	243	1,018	189	3,252	74	29	57	32	3,444
Commercial	25	26	5	15	6	77	2	1	1	1	82
Transport	9	10	5	4	3	32	1	—	—	—	33
Agriculture, quarries	3	4	—	3	1	11	—	—	—	—	11
Metals and machines	5	7	4	1	3	20	1	—	—	—	21
Precious metals, watches	10	6	3	2	5	25	1	—	—	—	26
Building	1	1	1	1	1	5	—	—	—	—	5
Wood, furniture	19	16	22	7	6	71	1	—	—	—	72
Bricks, etc.	1	2	1	—	1	5	—	—	—	—	5
Chemicals	10	10	18	2	3	43	4	—	—	2	49
Skins and leather	9	16	12	1	6	44	1	—	—	—	45
Paper, printing	35	74	65	4	44	222	2	1	—	1	226
Textiles	66	68	58	32	16	241	15	2	2	4	264
Dress	377	376	329	244	88	1,414	34	12	13	12	1,485
Food, etc., dealers and inns	86	114	79	74	50	403	14	2	2	4	425
General labour	4	8	5	1	2	19	2	—	—	1	22
Gas, water, sanitary service All others	63	89	78	24	31	285	7	4	3	5	304
Total	1,697	1,977	971	1,548	483	6,679	176	59	86	70	7,070

Occupational Group.	County of London, 1911.						External Boroughs, 1911.		London and 10 Boroughs, 1911.
	North.	South.	East.	West.	Central.	Total.	Group 1.	Group 2.	
Government	27	49	12	26	3	117	13	10	140
Defence	—	—	—	—	—	—	—	—	—
Professional	157	226	32	143	20	578	72	50	700
Domestic	748	953	176	1,065	111	3,053	228	248	3,529
Commercial	101	154	22	66	11	354	61	38	453
Transport	12	22	9	6	3	52	9	3	64
Agriculture, quarries	—	1	—	—	—	1	2	—	3
Metals and machines	15	35	13	12	3	78	16	3	97
Precious metals, watches	23	13	5	4	5	50	6	2	58
Building	—	—	—	—	—	—	—	—	—
Wood, furniture	24	19	28	10	4	85	10	2	97
Bricks, etc.	1	2	1	—	—	4	—	—	4
Chemicals	14	27	24	3	3	71	28	1	100
Skins and leather	21	18	24	2	5	70	6	1	77
Paper, printing	75	123	94	10	32	334	42	3	379
Textiles	75	98	43	55	12	284	49	20	353
Dress	420	469	346	246	55	1,536	236	66	1,838
Food, etc., dealers and inns	148	261	111	124	38	682	112	29	823
General labour	—	—	—	—	—	—	—	—	—
Gas, water, electricity, sanitary service All others	75	116	96	40	20	347	50	13	410
Total	1,936	2,587	1,037	1,812	324	7,696	939	490	9,125

Note.—Textiles and dress should be taken together when 1911 is compared with 1891.

TABLE B

COMPARISON OF OCCUPATIONS, 1891 AND 1911: GROUPED ACCORDING TO CHARLES BOOTH'S CLASSIFICATION.

County of London.

Numbers of Males and of Females: Age Distribution of Males.

(Detail of Tables V and VI, pp. 330–1.)

Occupations.	Dates.	Males. Ages. 10–	15–	20–	25–	35–	45–	55–	65–	Males. Total.	Females. Total.
Architects, etc.	1891	30	380	750	1,590	1,330	1,030	590	300	5,930	—
	1911	—	*90*	*470*	*1,260*	*1,100*	*970*	*620*	*350*	*4,860*	—
Builders and labourers	1891	40	520	620	1,810	2,240	2,060	1,070	460	8,820	40
	1911	*30*	*1,020*	*1,680*	*5,230*	*6,140*	*5,190*	*2,950*	*1,090*	*23,330*	*20*
Masons and labourers	1891	30	360	540	1,660	1,800	1,270	590	220	6,470	20
	1911	*10*	*190*	*350*	*1,140*	*1,050*	*1,040*	*780*	*320*	*4,880*	—
Bricklayers and labourers	1891	50	920	1,910	5,690	5,070	3,380	1,750	640	19,410	20
	1911	—	*300*	*780*	*3,770*	*3,590*	*3,450*	*2,240*	*890*	*15,020*	—
Carpenters and labourers	1891	190	2,260	3,340	8,700	8,210	6,520	3,530	1,470	34,220	270
	1911	*80*	*1,210*	*1,920*	*5,400*	*4,460*	*5,000*	*3,850*	*1,900*	*23,820*	*210*
Plasterers, labourers and paper-hangers	1891	30	420	680	1,820	1,850	1,170	620	270	6,860	30
	1911	*30*	*270*	*500*	*1,750*	*1,290*	*1,240*	*930*	*350*	*6,360*	—
Painters, glaziers	1891	130	1,830	3,500	8,960	8,580	5,860	2,730	920	32,510	160
	1911	*60*	*1,210*	*2,690*	*8,940*	*9,870*	*8,360*	*5,420*	*1,860*	*38,410*	*10*
Plumbers	1891	180	1,800	1,690	2,610	1,600	880	430	130	9,320	20
	1911	*60*	*970*	*1,140*	*2,140*	*1,930*	*1,430*	*670*	*240*	*8,580*	—
Locksmiths, gasfitters	1891	60	580	680	1,450	1,120	840	390	160	5,260	50
	1911	*30*	*580*	*860*	*1,710*	*1,230*	*850*	*540*	*200*	*6,000*	*1,050*
Building Total	1891	740	9,000	13,710	34,290	31,800	23,010	11,700	4,550	128,800	630
	1911	*300*	*5,840*	*10,390*	*31,340*	*30,660*	*27,530*	*18,000*	*7,200*	*131,260*	*1,290*

Carriage builders	1911	530	6,070	6,160	13,280	10,220	7,740	4,980	2,200	51,180	7,980
	1891	80	800	1,200	2,410	2,090	1,660	870	380	9,490	120
Coopers	1911	40	540	870	2,010	1,820	1,490	990	430	8,190	130
	1891	30	300	280	730	790	820	420	220	3,590	10
Shipwrights	1911	10	100	160	440	370	430	320	200	2,030	10
	1891	20	210	170	380	440	530	300	180	2,230	30
Wood and furniture Total	1911	10	270	330	710	590	550	480	280	3,220	10
	1891	1,220	7,860	7,730	14,950	12,410	9,490	5,010	2,420	61,090	6,990
	1911	590	6,980	7,520	16,440	13,000	10,210	6,770	3,110	64,620	8,130
Engineers and machine makers	1891	310	3,610	3,630	6,230	4,860	3,640	1,800	700	24,780	200
	1911	370	5,970	6,620	11,360	8,460	5,820	3,080	940	42,620	240
Blacksmiths	1891	120	1,340	1,560	2,950	2,700	2,080	1,080	400	12,230	40
	1911	20	560	770	1,850	1,820	1,590	1,040	460	8,110	10
Various iron and steel workers	1891	230	1,410	1,490	2,610	2,040	1,460	800	340	10,380	310
	1911	130	1,330	1,350	2,880	2,300	1,690	1,000	440	11,120	370
Other metal workers	1891	380	2,740	2,480	4,210	2,880	1,930	1,000	420	16,040	1,220
	1911	280	2,870	2,650	4,510	3,490	2,680	1,520	660	18,660	5,330
Metals Total	1891	1,040	9,100	9,160	16,000	12,480	9,110	4,680	1,860	63,430	1,770
	1911	800	10,730	11,390	20,600	16,070	11,780	6,640	2,500	80,520	5,950
Gold and silver smiths	1891	130	1,110	1,040	1,920	1,540	1,050	530	290	7,610	1,030
	1911	90	820	690	1,200	890	700	490	260	5,140	1,010
Watch and clock makers	1891	50	380	560	970	740	750	440	310	4,200	80
	1911	20	270	300	540	500	440	370	270	2,710	80
Electrical and surgical instruments	1891	140	1,440	1,560	2,180	1,210	730	330	150	7,740	520
	1911	320	4,430	4,480	7,820	4,720	2,360	920	350	25,400	3,450
Musical instruments, toys, etc.	1891	270	1,580	1,320	2,200	1,680	1,140	730	310	9,230	1,180
	1911	160	1,350	1,230	2,300	1,730	1,340	790	450	9,350	1,910
Dealers in precious metals, etc.[1]		30	510	550	1,090	860	620	350	130	4,140	870
Precious metals Total	1891	590	4,510	4,480	7,270	5,170	3,670	2,030	1,060	28,780	2,810
	1911	620	7,380	7,250	12,950	8,700	5,460	2,920	1,460	46,740	7,320

[1] In these cases it is not possible to classify the 1911 figures under the same headings as in 1891; they have been placed, however, as nearly as possible by the corresponding groups.

TABLE B—*continued.*

Occupations.	Dates.	Males. Ages. 10–	15–	20–	25–	35–	45–	55–	65–	Males. Total.	Females. Total.
Glass and earthenware	1891	190	820	760	1,120	840	460	200	60	4,450	520
	1911	*90*	*780*	*590*	*1,220*	*1,090*	*700*	*400*	*120*	*4,990*	*460*
Chemical workers	1891	240	670	450	880	680	480	280	130	3,810	2,030
	1911	*90*	*880*	*830*	*1,790*	*1,480*	*1,000*	*530*	*170*	*6,770*	*3,370*
Soap and candle makers	1891	80	350	260	400	320	210	140	70	1,830	360
	1911	*50*	*360*	*350*	*580*	*490*	*370*	*230*	*80*	*2,510*	*820*
Leather workers	1891	150	1,440	1,640	3,020	2,370	1,660	860	380	11,520	4,210
	1911	*170*	*2,110*	*1,780*	*2,880*	*2,190*	*1,660*	*1,020*	*440*	*12,250*	*6,910*
Saddlery	1891	50	440	470	920	740	590	290	190	3,690	180
	1911	*10*	*90*	*130*	*380*	*520*	*530*	*330*	*170*	*2,160*	*160*
Brush and comb makers	1891	120	540	390	810	630	500	360	170	3,520	2,020
	1911	*40*	*420*	*330*	*540*	*480*	*430*	*300*	*190*	*2,730*	*2,260*
Sundry manufacturers Total	1891	830	4,260	3,970	7,150	5,580	3,900	2,130	1,000	28,820	9,320
	1911	*450*	*4,640*	*4,010*	*7,390*	*6,250*	*4,690*	*2,810*	*1,270*	*3,141*	*13,980*
Sundry dealers	*1911*	—	—	—	—	—	—	—	—	*3,220*	*770*
Printers	1891	2,300	8,440	6,750	9,140	5,630	3,390	1,630	640	37,920	2,130
	1911	*740*	*6,510*	*5,600*	*9,360*	*8,480*	*5,430*	*2,770*	*940*	*39,830*	*6,860*
Bookbinders	1891	220	1,180	1,090	1,610	1,160	680	350	120	6,410	9,440
	1911	*70*	*740*	*720*	*1,140*	*1,010*	*880*	*540*	*190*	*5,290*	*8,290*
Paper manufacturers	1891	240	830	610	930	690	390	260	120	4,070	10,650
	1911	*150*	*1,320*	*1,170*	*1,850*	*1,270*	*840*	*470*	*170*	*7,240*	*18,360*
Stationers	1891	180	1,020	920	1,390	970	690	370	150	5,690	3,190
	1911	*30*	*450*	*540*	*950*	*740*	*570*	*360*	*140*	*3,780*	*2,560*
Publishers and booksellers	1891	220	1,020	970	1,700	1,290	880	490	260	6,830	950
	1911	*170*	*1,110*	*1,180*	*2,280*	*1,970*	*1,400*	*800*	*350*	*9,260*	*1,920*
Miscellaneous	*1911*[1]	—	—	—	—	—	—	—	—	*180*	—
Printing and paper Total	1891	3,160	12,490	10,340	14,770	9,740	6,030	3,100	1,290	60,920	26,350
	1911	*1,160*	*10,130*	*9,210*	*15,580*	*13,470*	*9,120*	*4,940*	*1,790*	*65,580*	*37,980*

	1911	40	240	200	390	280	200	230	240	1,900	2,830
Woollen goods makers	1891	20	140	120	190	200	180	120	100	1,070	4,980
	1911	50	190	200	340	270	210	140	100	1,500	1,200
Dyers and cleaners	1891	10	80	70	150	110	90	50	30	590	400
	1911	20	160	140	250	230	200	130	60	1,190	750
Rope and canvas makers	1891	10	210	240	430	290	200	160	60	1,600	2,640
	1911	90	420	220	370	370	310	310	100	2,100	1,240
Floorcloth, etc., rubber manufacturers	1891	30	240	170	310	270	200	190	110	1,520	2,010
	1911	50	240	240	490	410	260	150	70	1,910	1,160
Textiles Total	1891	30	500	550	1,070	670	390	240	100	3,550	1,410
	1911	250	1,250	1,060	1,840	1,560	1,250	880	570	8,660	7,210
Tailors	1891	100	1,170	1,150	2,150	1,540	1,060	760	400	8,330	11,440
	1911	530	3,210	4,120	7,220	4,680	3,580	2,490	1,640	27,470	24,870
Boot and shoe makers	1891	450	4,950	5,150	9,930	7,820	4,870	2,470	1,350	36,990	34,050
	1911	600	3,560	4,010	7,370	5,670	4,970	3,340	1,940	31,460	7,530
Hatters	1891	170	2,150	2,070	4,620	4,940	4,090	2,700	1,800	22,540	5,400
	1911	60	380	490	720	660	420	290	170	3,190	2,290
Dressmakers[1]	1891	40	540	560	920	790	460	300	120	3,730	4,150
	1911	—	—	—	—	—	—	—	—	2,110	81,340
Seamstresses, etc.[3]	1891	10	240	240	470	340	210	130	60	1,700	81,890
	1911	30	150	160	290	210	140	70	30	1,080	17,400
Machinists[1]	1891	20	260	230	520	360	250	130	50	1,820	24,970
	1911	—	—	—	—	—	—	—	—	1,550	9,110
Trimmings, etc.[1,2]	1891	10	90	50	80	60	40	10	10	350	110
	1911	—	—	—	—	—	—	—	—	5,810	13,860
Drapers, etc.	1891	50	630	590	1,130	960	730	480	250	4,820	10,190
	1911	270	3,440	4,470	4,650	2,360	1,400	600	250	17,440	13,490
Dress Total	1891	150	3,380	4,440	5,280	3,350	2,190	1,200	480	20,470	13,920
	1911	1,770	12,070	14,650	22,710	15,390	11,760	7,430	4,330	90,110	169,890
		900	12,240	13,330	22,950	18,620	12,840	7,420	4,120	92,430	174,680

[1] For these industries the division by age is not available. Approximate numbers have been included in the totals.

[2] In these cases it is not possible to classify the 1911 figures under the same headings as in 1891; they have been placed, however, as nearly as possible by the corresponding groups.

[3] The comparison is more accurate if tailors, dressmakers and seamstresses are amalgamated.

TABLE B—*continued.*

Occupations.	Dates.	Males. Ages. 10–	15–	20–	25–	35–	45–	55–	65–	Males. Total.	Females. Total.
Millers, sugar refiners	1891	40	270	290	480	370	260	130	50	1,890	430
	1911	*30*	*380*	*520*	*1,070*	*810*	*520*	*300*	*120*	*3,750*	*1,380*
Other dealers in food [1]	*1911*	—	*20*	*80*	*320*	*250*	*200*	*90*	*40*	*1,000*	*40*
Brewers, etc.	1891	20	330	630	1,290	950	600	240	80	4,140	260
	1911	*20*	*440*	*530*	*1,170*	*1,130*	*770*	*380*	*110*	*4,550*	*740*
Tobacco manufacturers	1891	200	650	640	1,570	1,270	720	490	160	5,700	3,920
	1911	*60*	*590*	*770*	*1,660*	*1,240*	*970*	*610*	*240*	*6,140*	*6,930*
Bakers and confectioners	1891	390	2,930	3,010	4,880	3,070	2,100	1,180	470	18,030	7,730
	1911	*230*	*2,820*	*3,220*	*5,410*	*4,090*	*3,050*	*1,600*	*620*	*21,040*	*14,970*
Milksellers	1891	440	1,550	1,650	2,500	1,420	800	340	150	8,850	1,320
	1911	*130*	*1,500*	*1,830*	*3,250*	*2,280*	*1,140*	*460*	*140*	*10,730*	*2,030*
Butchers and fishmongers	1891	560	4,190	4,730	7,400	4,960	3,160	1,580	450	27,030	1,600
	1911	*190*	*3,960*	*4,380*	*7,600*	*6,720*	*4,080*	*2,080*	*710*	*29,270*	*3,340*
Grocers and oilmen / Chocolate makers	1891	1,200	5,520	4,740	6,810	4,580	2,630	1,560	600	27,640	3,900
	1911	*430*	*4,910*	*4,460*	*7,550*	*5,970*	*3,770*	*2,020*	*710*	*29,820*	*8,930*
Publicans, etc.	1891	140	890	1,210	3,710	3,400	2,520	1,120	350	13,340	1,650
	1911	*40*	*980*	*1,220*	*3,470*	*3,860*	*2,830*	*1,370*	*500*	*14,270*	*5,650*
Lodging and coffee house keepers [2]	1891	—	—	—	—	—	—	—	—	4,790	6,210
	1911	*10*	*120*	*210*	*1,090*	*1,620*	*1,360*	*820*	*340*	*5,570*	*11,820*
Food, etc. Total	1891	3,010	16,480	17,140	29,730	31,330	13,880	7,270	2,570	111,410	27,020
	1911	*1,140*	*15,720*	*17,220*	*32,590*	*27,520*	*18,690*	*9,730*	*3,530*	*126,140*	*55,830*
Shopkeepers, miscellaneous (ironmongers, glass, pawnbrokers, art-dealers)	1891	260	1,550	1,340	1,980	1,430	930	540	300	8,330	840
	1911	*170*	*1,580*	*1,380*	*2,310*	*1,720*	*1,250*	*760*	*330*	*9,500*	*1,110*
Coal and timber dealers	1891	80	510	690	1,480	1,340	1,000	640	350	6,090	480
	1911	*40*	*490*	*530*	*1,280*	*1,330*	*1,080*	*650*	*350*	*5,750*	*950*
General and multiple shops	1891	200	1,240	1,090	1,980	1,890	1,360	750	400	8,910	5,330
	1911	*110*	*1,320*	*1,250*	*2,420*	*2,140*	*1,620*	*1,080*	*430*	*10,370*	*7,500*
Costers, newsboys, etc.	1891	340	1,130	1,250	2,370	1,980	1,420	870	490	9,850	3,010
	1911	*1,370*	*1,450*	*1,680*	*3,590*	*3,040*	*2,240*	*1,480*	*840*	*15,690*	*3,070*
Miscellaneous shops, etc. Total	1891	880	4,430	4,370	7,810	6,640	4,710	2,800	1,540	33,180	9,650

Bankers, merchants, clerks . .	1891	2,400	22,700	22,300	30,900	19,300	12,500	6,400	2,600	119,100	9,330
	1911	*1,510*	*25,310*	*25,730*	*36,440*	*24,110*	*16,070*	*8,900*	*3,710*	*141,780*	*38,740*
Cab, tram and busmen and horsekeepers	1891	230	2,770	6,570	15,120	11,700	7,140	3,270	1,250	48,050	160
	1911	*30*	*860*	*2,390*	*10,230*	*10,550*	*7,980*	*4,610*	*1,560*	*38,210*	*250*
Motor drivers, etc.	*1911*	*20*	*720*	*2,300*	*5,960*	*3,670*	*1,730*	*350*	*20*	*14,770*	—
Carters	1891	1,510	7,060	7,790	13,220	7,710	4,330	1,650	410	43,680	120
	1911	*1,540*	*9,870*	*8,190*	*19,800*	*14,220*	*7,930*	*3,230*	*830*	*65,610*	*180*
Railway service, including porters	1891	310	2,790	4,120	7,620	4,990	2,970	1,450	350	24,600	160
	1911	*240*	*3,590*	*5,280*	*10,390*	*6,760*	*4,910*	*2,730*	*470*	*34,370*	*470*
Railway labourers, navvies . .	1891	20	180	350	930	870	680	340	130	3,500	—
	1911	*10*	*220*	*520*	*2,000*	*1,620*	*1,070*	*610*	*180*	*6,230*	*60*
Gardeners, etc.	1891	110	830	1,190	2,430	2,290	1,880	1,450	870	11,050	1,040
	1911	*30*	*510*	*750*	*1,740*	*1,920*	*1,750*	*1,550*	*1,010*	*9,260*	*140*
Country labour (agriculture, quarries) [2]	1891	—	—	—	—	—	—	—	—	3,670	100
	1911	*10*	*230*	*310*	*710*	*610*	*590*	*410*	*210*	*3,080*	*70*
Seamen and fishermen . . .	1891	110	1,350	1,830	3,320	2,480	1,790	840	290	12,010	60
	1911	*10*	*730*	*1,360*	*2,610*	*1,940*	*1,480*	*820*	*290*	*9,240*	*90*
Lightermen, bargemen . . .	1891	50	640	780	1,500	1,340	1,000	520	200	6,030	20
	1911	*10*	*330*	*470*	*1,110*	*1,010*	*870*	*580*	*250*	*4,630*	*10*
Locomotion, etc. Total [3] . .	1891	2,450	16,130	23,180	45,100	32,080	20,270	9,770	3,610	152,590	1,670
	1911	*2,900*	*17,060*	*21,570*	*54,550*	*42,300*	*28,310*	*14,890*	*4,820*	*185,400*	*1,270*

[1] In these cases it is not possible to classify the 1911 figures under the same headings as in 1891; they have been placed, however, as nearly as possible by the corresponding groups.

[2] For these industries the division by age is not available. Approximate numbers have been included in the totals.

[3] Not strictly comparable at the two dates.

TABLE B—*continued.*

Occupations.	*Dates.*	Males. Ages. 10–	15–	20–	25–	35–	45–	55–	65–	Males. Total.	Females. Total.
Dock and wharf service . .	1891	10	60	150	480	570	480	280	30	2,060	30
	1911	—	*60*	*90*	*460*	*510*	*490*	*330*	*100*	*2,040*	—
Dock labour	1891	50	740	1,600	4,020	3,780	2,690	1,300	380	14,560	—
	1911	—	*480*	*1,380*	*4,890*	*5,480*	*4,380*	*2,290*	*600*	*19,500*	—
Coal porters	1891	70	390	720	1,600	1,150	630	210	70	4,840	—
	1911	*10*	*250*	*490*	*1,520*	*1,560*	*970*	*440*	*80*	*5,320*	—
Gasworks service	1891	20	250	810	1,990	1,460	880	360	80	5,850	20
	1911	*10*	*350*	*680*	*2,240*	*2,290*	*1,560*	*770*	*170*	*8,070*	*20*
Warehousemen and messengers	1891	15,150	17,900	6,500	8,460	6,000	4,520	2,560	1,030	62,120	1,440
	1911	*10,270*	*22,470*	*5,270*	*6,330*	*4,740*	*3,570*	*2,460*	*1,180*	*56,290*	*2,220*
General labour	1891	560	8,810	10,680	21,480	16,990	12,000	6,370	2,620	79,510	230
	1911	*60*	*2,470*	*3,920*	*9,880*	*10,240*	*8,610*	*4,830*	*1,600*	*41,610*	—
Factory labourers	1891	380	1,570	1,050	1,520	1,160	850	380	100	7,010	1,620
	1911	*90*	*590*	*290*	*350*	*280*	*230*	*140*	*30*	*2,000*	*1,670*
Engine drivers and undefined artisans	1891	370	2,710	2,260	4,130	3,300	2,420	1,170	360	16,720	1,310
	1911	*40*	*580*	*750*	*2,400*	*2,400*	*1,750*	*1,000*	*250*	*9,170*	*270*
General labour Total . . .	1891	16,610	32,430	23,770	43,680	34,410	24,470	12,630	4,670	192,670	4,660
	1911	*10,480*	*27,250*	*12,870*	*28,070*	*27,500*	*21,560*	*12,260*	*4,010*	*144,000*	*4,180*
Civil and municipal service (*including prisons in 1911*)	1891	1,190	3,990	3,580	6,800	3,600	3,210	1,640	590	24,600	2,630
	1911	*940*	*5,450*	*5,300*	*11,590*	*10,100*	*6,930*	*2,880*	*710*	*43,900*	*10,220*
Waterworks and drainage, paviors, scavengers	1891	40	260	420	1,110	,020	940	610	380	4,780	130
	1911	*40*	*350*	*480*	*2,130*	*2,690*	*2,020*	*1,040*	*410*	*9,160*	*50*
Police and prisons	1891	—	40	1,980	5,410	3,340	1,230	110	60	12,170	100
	1911	—	—	*2,640*	*6,380*	*4,070*	*1,090*	*50*	*10*	*14,240*	—

Army and Navy	1891	70	3,070	4,810	3,690	1,480	1,110	980	640	15,850	—
	1911	*70*	*2,810*	*5,010*	*4,840*	*1,970*	*900*	*670*	*970*	*17,240*	—
Law	1891	210	1,780	2,170	4,190	2,900	1,740	1,050	420	14,460	110
	1911	*130*	*1,640*	*1,650*	*2,830*	*2,520*	*2,370*	*1,460*	*690*	*13,290*	*770*
Medicine, nursing	1891	80	680	1,300	3,270	2,410	1,700	960	690	11,090	15,420
	1911	*60*	*720*	*1,060*	*3,060*	*2,960*	*2,260*	*1,260*	*540*	*11,920*	*18,870*
Art and amusement . . .	1891	160	1,140	2,070	4,430	3,190	2,070	1,150	560	14,770	970
	1911	*180*	*1,960*	*2,940*	*6,690*	*5,570*	*3,770*	*1,880*	*880*	*23,870*	*13,664*
Literature and science . . .	1891	10	180	520	1,160	940	620	340	170	3,940	560
	1911	*40*	*420*	*680*	*1,630*	*1,490*	*1,190*	690	*320*	*6,460*	*2,170*
Education	1891	110	630	960	2,650	1,450	1,030	490	200	7,520	20,040
	1911	*30*	*490*	*1,110*	*2,370*	*1,930*	*1,900*	*790*	*220*	*8,840*	*19,750*
Religion	1891	60	80	320	1,280	1,230	1,130	720	600	5,490	3,100
	1911	*10*	*80*	*230*	*1,130*	*1,240*	*1,220*	*910*	*650*	*5,470*	*3,620*
Professions, etc. Total . . .	1891	1,930	11,850	18,130	33,990	21,560	14,780	8,120	4,310	114,670	51,560
	1911	*1,500*	*13,920*	*21,100*	*42,650*	*34,540*	*23,650*	*11,630*	*5,400*	*154,390*	*69,110*
Domestic service, waiters, etc. .	1891	1,330	8,990	9,910	12,600	7,290	3,980	1,770	660	46,530	259,630
	1911	*810*	*10,160*	*13,980*	*19,910*	*12,350*	*7,240*	*3,480*	*1,130*	*69,060*	*253,750*
Extra service (laundry, hair-dressers, etc.)	1891	260	1,470	1,780	3,210	2,640	2,040	1,380	770	13,550	79,470
	1911	*280*	*1,600*	*1,730*	*4,160*	*4,310*	*3,130*	*1,930*	*890*	*18,030*	*72,480*
Service Total	1891	1,590	10,460	11,690	15,810	9,930	6,020	3,150	1,430	60,080	339,100
	1911	*1,090*	*11,760*	*15,710*	*24,070*	*16,660*	*10,370*	*5,410*	*2,020*	*87,090*	*326,230*
Grand Total	1891	38,500	175,000	186,000	326,000	239,000	165,000	86,500	38,000	1,254,000	668,000
	1911	*24,000*	*175,000*	*184,000*	*358,000*	*290,000*	*208,000*	*117,500*	*47,500*	*1,404,000*	*770,000*

TABLE C

Comparison of Industries, 1911 and 1921: Grouped according to Census Classification.

London and the five Home Counties:

Estimated number of Males and Females in each Industry.

(Detail of Table VIII, p. 335.)

(The percentage columns show the proportions of the 1921 entries which are not definitely allocated to the region in the Census Report: see p. 340.)

	Males.			Females.		
	1911. 00's.	1921. 00's.	Per cent. of Total not located in 1921.	1911. 00's.	1921. 00's.	Per cent. of Total not located in 1921.
Agriculture, mines, quarries	1,747	1,540	8	35	140	6
Bricks	102	82	2	2	5	1
Glass	53	76	3	5	13	1
Chemicals, matches, etc.	274	375	5	93	168	1
Candles, soap	44	52	6	11	28	1
Iron and steel and manufactures	4	12	1	—	3	1
Copper and manufactures	—	1	1	—	—	—
Brass manufacture and working	52	39	3	1	5	2
Blacksmiths	119	48	3	1	1	1
Galvanised sheets	—	2	1	—	—	—
Wire	20	9	1	5	2	1
Engineering, machinery, ships	802	1,317	3	16	100	1
Electric apparatus, etc.	280	484	5	58	189	1
Railway coach building	34	46	1	—	1	1
Motors and cycles	221	430	3	6	29	1
Carriages	143	230	3	2	25	—
Tools, etc.	21	23	3	1	4	1
Other metal work	308	391	3	73	104	3
Watches, jewels, etc.	139	131	3	17	29	1
Cotton	2	6	1	2	5	1
Wool	3	5	1	1	3	1
Silk	11	12	1	23	18	1
Flax, hemp, rope	27	28	6	28	29	3
Lace	2	2	2	6	3	2
Carpets	5	5	2	2	2	1
Hosiery, web, etc.	20	41	4	68	56	1
Dyeing, etc.	16	14	1	7	5	1
Tailors	469	497	5	412	469	2
Dressmakers	33	42	9	1,328	736	5
Hats	36	34	4	46	42	1
Boots	318	250	3	59	63	1
Dress, sundry	79	83	6	399	298	4
Furriers, tanners	123	122	4	46	54	3
Leather goods	101	85	5	37	51	3
Millers	60	82	5	3	16	2
Bakers, confectioners	424	325	4	187	131	1
Provision curers	87	183	6	28	100	2
Jam and sweet manufacturers	67	112	7	130	223	1
Brewers, etc.	237	235	3	12	58	1
Mineral waters	46	36	4	11	18	2

TABLE C—*continued.*

	Males.			Females.		
	1911. 00's.	1921. 00's.	Per cent. of Total not located in 1921	1911. 00's.	1921. 00's.	Per cent. of Total not located in 1921.
Tobacco	45	53	6	64	90	2
Paper manufacture	75	124	2	30	42	1
Wallpaper and staining	20	19	3	—	—	1
Printing, stationery, etc.	844	967	4	418	508	2
Wood sawyers, etc.	166	206	7	4	14	2
Furniture, fittings	633	504	7	91	75	4
Building and construction	2,675	2,254	19	9	32	4
Rubber	59	73	4	21	41	2
Floorcloth	23	24	2	2	5	—
Scientific instruments	97	144	4	23	63	2
Musical instruments	120	143	11	7	23	3
Miscellaneous manufacturers	134	188	6	138	224	2
Gas, water, electricity	399	583	3	3	19	1
Railways	1,097	1,330	4	12	54	2
Buses and trams	250	410	4	3	14	2
Carting, garages, stables	905	672	12	7	20	4
Docks and rivers	785	735	8	5	44	14
Warehouses, porters, messengers	339	[1]	16	39	[1]	3
Grocers	670	546	4	123	233	1
Dairymen	243	189	4	44	52	2
Butchers	356	291		41	48	1
Fishmongers	148	137	5	23	26	2
Greengrocers	238	221	5	50	52	2
Wine and spirit dealers	84	67	6	8	16	1
Tobacconists	66	61	5	30	34	1
Chemists	130	112	5	26	59	2
Oil and colourmen	122	129	8	10	28	1
Ironmongers	220	218	6	20	51	1
Drapers, hatters, etc.	701	514	8	371	590	1
Boot and shoe dealers	76	70	4	109	42	1
Furniture dealers	143	140	4	16	35	1
Bankers	216	310	1	6	124	2
Insurance	315	391	14	24	183	4
Other shops, merchants, brokers	2,157	2,135	14	468	935	5
Domestic service	766	598	7	4,160	3,236	13
National Government	1,493	2,565	41	136	590	4
Local Government	821	1,352	8	172	683	2
Professions	1,185	1,016	8	1,121	923	14
Inns, restaurants, lodging houses	856	766	3 —	820	1,041	6
Theatres, games, miscellaneous services	1,937	[1]	7	1,755	[1]	

[1] The numbers in these groups cannot be computed with sufficient accuracy to be comparable with 1911.

TABLE D

COMPARISON OF INDUSTRIES, 1923 and 1929: Grouped according to Unemployment Insurance Classification.

London Division (*Greater London*).

Numbers of insured men, lads, women, and girls, and totals; and percentage of total numbers in 1929 compared with 1923, in each industry.

(Detail of Table IX, p. 336.)

Industries.	Men over 18 years.		Lads 16 to 18 Years.		All Males.		Women over 18 Years.		Girls 16 to 18 Years.		All Females.		Total [1] Persons in 1929 as Percentage of Total in 1923.
	1923.	1929.	1923.	1929.	1923.	1929.	1923.	1929.	1923.	1929.	1923.	1929.	
Chemicals	13,740	*13,410*	1,130	*1,160*	14,870	*14,570*	8,510	*7,530*	1,620	*1,570*	10,130	*9,100*	97
Glass	5,980	*6,880*	850	*700*	6,830	*7,580*	1,160	*1,390*	220	*230*	1,380	*1,620*	116
Explosives	2,660	*2,120*	120	*250*	2,780	*2,370*	930	*210*	140	*20*	1,070	*230*	70
Oils, soaps, matches, ink	10,990	*12,230*	1,040	*1,250*	12,030	*13,480*	4,850	*5,870*	900	*1,480*	5,750	*7,350*	120
Paints, etc.	3,770	*5,420*	350	*510*	4,120	*5,930*	1,030	*1,710*	290	*350*	1,320	*2,060*	151
	37,140	*40,060*	3,490	*3,870*	40,630	*43,930*	16,480	*16,710*	3,170	*3,650*	19,650	*20,360*	110
Shipbuilding	13,400	*10,070*	470	*460*	13,870	*10,530*	260	*230*	40	*20*	300	*250*	79
Engineering, founding .	84,310	*69,450*	6,310	*7,030*	90,620	*76,480*	7,250	*9,310*	1,110	*1,870*	8,360	*11,180*	92
Electrical engineering .	4,960	*8,960*	650	*1,170*	5,610	*10,130*	980	*2,760*	280	*480*	1,260	*3,240*	200
Electrical wiring and contracting	2,650	*2,210*	200	*310*	2,850	*2,520*	160	*240*	60	*30*	220	*270*	94
Electrical cables, lamps .	22,260	*24,190*	2,530	*3,290*	24,790	*27,480*	11,470	*17,470*	2,480	*4,110*	13,950	*21,580*	130
Motor vehicles . . .	27,850	*33,530*	1,910	*2,780*	29,760	*36,310*	2,240	*3,180*	230	*410*	2,470	*3,590*	128
Carts, carriages . . .	6,660	*5,770*	500	*490*	7,160	*6,260*	540	*850*	70	*190*	610	*1,040*	97
Brass, etc., founding and working	6,130	*5,780*	750	*510*	6,880	*6,290*	1,600	*710*	300	*140*	1,900	*850*	84
Watches, jewellery . .	5,860	*4,870*	550	*560*	6,410	*5,430*	2,290	*2,280*	400	*390*	2,690	*2,670*	91
Heating and ventilating	450	*1,190*	30	*120*	480	*1,310*	40	*70*	—	*10*	40	*80*	277
Constructural engineering	1,530	*3,230*	40	*200*	1,570	*3,430*	80	*60*	10	*10*	90	*70*	219

Hand tools, cutlery, etc.	560	*970*	100	*140*	660	*1,110*	310	*520*	40	*110*	350	*630*	177
Wire netting, rope . .	770	*1,090*	190	*180*	960	*1,270*	250	*200*	70	*100*	320	*300*	126
Other	16,460	*20,900*	1,890	*2,210*	18,350	*23,110*	6,970	*9,070*	1,970	*2,590*	8,940	*11,660*	131
	193,850	*192,210*	16,120	*19,450*	209,970	*211,660*	34,440	*46,950*	7,060	*10,460*	41,500	*57,410*	110
Hosiery	670	*700*	200	*70*	870	*770*	1,310	*3,110*	500	*490*	1,810	*3,600*	165
Rope, etc.	580	*630*	100	*100*	680	*730*	1,000	*1,040*	140	*160*	1,140	*1,200*	108
Other textiles . . .	4,670	*3,840*	520	*480*	5,190	*4,320*	6,580	*6,790*	1,260	*1,480*	7,840	*8,270*	98
	5,920	*5,170*	820	*650*	6,740	*5,820*	8,890	*10,940*	1,900	*2,130*	10,790	*13,070*	110
Tailoring	17,940	*21,520*	1,590	*1,820*	19,530	*23,340*	20,920	*24,250*	2,760	*3,980*	23,680	*28,230*	122
Dress, millinery . . .	6,390	*6,650*	1,040	*890*	7,430	*7,540*	40,960	*50,480*	9,790	*9,420*	50,750	*59,900*	117
Blouses, shirts, underclothing	1,980	*2,330*	170	*290*	2,150	*2,620*	12,080	*13,020*	1,950	*3,070*	14,030	*16,090*	117
Hats, etc.	2,240	*2,260*	260	*310*	2,500	*2,570*	3,290	*3,410*	590	*550*	3,880	*3,960*	104
Boots, etc.	8,160	*6,840*	970	*740*	9,130	*7,580*	4,300	*4,170*	970	*730*	5,270	*4,900*	89
Other dress	5,100	*3,110*	470	*300*	5,570	*3,410*	3,930	*2,930*	790	*620*	4,720	*3,550*	69
	41,810	*42,710*	4,500	*4,350*	46,310	*47,060*	85,480	*98,260*	16,850	*18,370*	102,330	*116,630*	112
Leather dressing . . .	5,970	*5,710*	470	*820*	6,440	*6,530*	2,900	*3,390*	550	*660*	3,450	*4,050*	110
Leather goods . . .	5,640	*4,700*	750	*620*	6,390	*5,320*	4,460	*4,810*	870	*930*	5,330	*5,740*	96
	11,610	*10,410*	1,220	*1,440*	12,830	*11,850*	7,360	*8,200*	1,420	*1,590*	8,780	*9,790*	102
Bread, biscuits, etc. . .	23,360	*17,070*	2,150	*1,380*	25,510	*18,450*	11,400	*9,140*	2,390	*2,260*	13,790	*11,400*	78
Chocolate, confectionery	4,810	*4,290*	510	*380*	5,320	*4,670*	8,710	*8,900*	2,810	*2,490*	11,520	*11,390*	97
Other food	18,220	*18,200*	820	*1,000*	19,040	*19,200*	14,150	*15,520*	1,970	*2,510*	16,120	*18,030*	108
Drink	14,080	*16,610*	580	*860*	14,660	*17,470*	5,250	*6,470*	630	*540*	5,880	*7,010*	123
	60,470	*56,170*	4,060	*3,620*	64,530	*59,790*	39,510	*40,030*	7,800	*7,800*	47,310	*47,830*	99

[1] See footnote, p. 427.

TABLE D—*continued.*

Industries.	Men over 18 Years. 1923.	Men over 18 Years. 1929.	Lads 16 to 18 Years. 1923.	Lads 16 to 18 Years. 1929.	All Males. 1923.	All Males. 1929.	Women over 18 Years. 1923.	Women over 18 Years. 1929.	Girls 16 to 18 Years. 1923.	Girls 16 to 18 Years. 1929.	All Females. 1923.	All Females. 1929.	Total[1] Persons in 1929 as Percentage of Total in 1923.
Tobacco	4,860	*5,600*	490	*340*	5,350	*5,940*	6,840	*9,870*	1,370	*1,970*	8,210	*11,840*	133
Paper	2,340	*2,310*	240	*270*	2,580	*2,580*	1,970	*1,670*	410	*440*	2,380	*2,110*	97
Cardboard and stationery	6,820	*6,510*	1,000	*900*	7,820	*7,410*	11,840	*11,700*	2,740	*2,540*	14,580	*14,240*	98
Printing and binding .	61,720	*65,400*	6,570	*6,970*	68,290	*72,370*	25,790	*27,570*	4,360	*5,200*	30,150	*32,770*	110
Other paper	2,180	*3,100*	440	*460*	2,620	*3,560*	1,510	*2,040*	550	*710*	2,060	*2,750*	138
	73,060	*77,320*	8,250	*8,600*	81,310	*85,920*	41,110	*42,980*	8,060	*8,890*	49,170	*51,870*	108
Furniture, etc. . . .	25,190	*34,370*	2,690	*5,000*	27,880	*39,370*	5,390	*6,680*	970	*1,250*	6,360	*7,930*	142
Other woodwork . .	15,140	*14,170*	1,660	*1,860*	16,800	*16,030*	3,100	*2,160*	670	*430*	3,770	*2,590*	93
	40,330	*48,540*	4,350	*6,860*	44,680	*55,400*	8,490	*8,840*	1,640	*1,680*	10,130	*10,520*	124
Building	154,600	*167,260*	4,050	*5,940*	158,650	*173,200*	2,080	*1,940*	220	*240*	2,300	*2,180*	113
Public works, contracting	18,090	*23,660*	400	*530*	18,490	*24,190*	200	*340*	50	*40*	250	*380*	136
	172,690	*190,920*	4,450	*6,470*	177,140	*197,390*	2,280	*2,280*	270	*280*	2,550	*2,560*	116
Musical instruments .	11,460	*15,820*	1,050	*1,470*	12,510	*17,290*	2,180	*5,270*	400	*700*	2,580	*5,970*	159
Scientific instruments .	5,990	*8,640*	700	*1,310*	6,690	*9,950*	3,130	*4,810*	490	*980*	3,620	*5,790*	156
Toys and games . . .	2,770	*2,480*	400	*330*	3,170	*2,810*	2,030	*2,240*	590	*620*	2,620	*2,860*	100
Rubber	6,250	*7,510*	750	*560*	7,000	*8,070*	4,230	*4,570*	940	*970*	5,170	*5,540*	115
Oilcloth, linoleum . .	960	*1,280*	110	*140*	1,070	*1,420*	230	*500*	90	*60*	320	*560*	146
Brush and brooms . .	1,280	*1,280*	140	*140*	1,420	*1,420*	980	*1,210*	300	*170*	1,280	*1,380*	106
	28,710	*37,010*	3,150	*3,950*	31,860	*40,960*	12,780	*18,600*	2,810	*3,500*	15,590	*22,100*	136

Gas, water, electricity .	39,800	36,050	1,270	1,370	41,070	37,420	1,570	1,520	180	200	1,750	1,720	95
Railway service . . .	34,000	28,730	2,610	2,930	36,610	31,660	2,240	2,130	330	360	2,570	2,490	90
Trams and omnibuses .	44,170	48,310	340	380	44,510	48,690	1,330	1,150	70	40	1,400	1,190	113
Other road transport .	41,090	46,060	1,770	2,210	42,860	48,270	1,370	1,650	180	230	1,550	1,880	117
Shipping service . . .	16,120	20,100	760	1,090	16,880	21,190	1,070	1,700	80	120	1,150	1,820	132
Docks, canals, etc. . .	49,310	45,520	830	940	50,140	46,460	660	840	50	90	710	930	97
Other transport and storage	8,080	4,830	710	730	8,790	5,560	1,130	920	110	90	1,240	1,010	67
	192,770	193,550	7,020	8,280	199,790	201,830	7,800	8,390	820	930	8,620	9,320	105
Quarries, bricks, etc. .	6,530	8,450	390	540	6,920	8,990	900	1,060	120	140	1,020	1,200	133
Offices, shops, etc. . .	210,020	259,130	28,900	34,820	238,920	293,950	125,690	154,700	19,540	26,610	145,230	181,310	127
Other occupations . .	185,360	175,940	10,240	11,990	195,600	187,930	127,980	145,920	10,860	15,140	138,840	161,060	107
Total	1,304,930	1,379,240	98,720	116,600	1,403,650	1,495,840	527,600	615,250	83,870	103,340	611,470	718,590	—
Estimated addition for persons over 65 years in 1929	—	57,000	—	—	—	57,000	—	4,900	—	—	—	4,900	—
	1,304,930	1,436,000	98,720	117,000	1,403,650	1,553,000	527,600	620,000	83,870	103,000	611,470	723,000	113

[1] In 1929 persons over 65 years were excluded from insurance. To obtain comparability with 1923 it is necessary to add 4 per cent. to men and 0·8 per cent. to women throughout to the entries for 1929. This has been done in each industry to obtain the final percentage column, but no addition has been made in the separate industries as given under 1929.

TABLE E

Age Distribution by Occupations, 1891 and 1911.

(Charles Booth's Classification.)

County of London, Males only.

(Detail of Table VII: see pp. 321 and 337 for further explanation.)

Occupation.	Percentages of Numbers aged 20 to 25. 1891. Under 20 Years.	1891. Over 25 Years.	1891.	1911. Under 20 Years.	1911. Over 25 Years.	1911.	Total Number of Males in 1911 as per cent. of Total Number in 1891.
Architects	44	643		20	918		88
Builders	93	1,238		62	1,223		264
Masons	72	1,015		59	1,260		76
Bricklayers	51	868	697	60	1,797	1,263	77 97
Carpenters	73	851		67	1,125		70
Plasterers	65	836		59	1,107		93
Painters	54	775		47	1,240		118
Plumbers	117	424		90	561		92
Locksmiths, etc.	94	480		71	525		114
Cabinet makers	127	527		107	624		112
Carriage builders	73	630		67	789		86
Coopers	117	1,067		70	1,109		57
Shipwrights	136	1,076		84	775		145
Engines and machines	108	476		96	448		171
Blacksmiths	93	581		75	875		66
Various iron and steel	110	487		107	614		107
Other metals	126	425		119	484		116
Gold and silver	119	511		130	506		67
Watch and clock	75	571		94	700		65
Electrical and surgical	101	294		104	364		354
Musical instruments	140	460		122	535		101
Glass and earthenware	132	354		147	597		112
Chemical	105	229		118	600		180
Soap and candle	170	552		114	496		189
Leather	98	507		128	461		106
Saddlery	104	578		80	1,497		59
Brush and comb, ivory, etc.	172	639		139	590		78
Printers	159	303		130	482		105
Bookbinders	128	360		112	502		83
Paper manufacturers, stationery	164	401		126	391		178
Stationers	129	287		91	514		66
Publishers and booksellers	128	566		109	598		136
Silk and fancy goods	112	560		126	655		54
Wool, etc.	124	526		120	609		39
Dyers and cleaners	127	638		93	475		134
Rope and canvas	227	608		166	653		73
Floorcloth and rubber	120	563		98	457		185
Tailors	90	475		104	513		135
Boot and shoe	104	581		118	874		72
Hatters	89	464		103	458		117
Dressmakers	—	—		109	515		81
Seamstresses	—	—		118	561		168
Machinists	—	—		198	354		23
Trimmings, etc.	—	—		116	600		83
Drapers, etc.	83	208		80	284		118

TABLE E—*continued.*

Occupation.	Percentages of Numbers aged 20 to 25. 1891. Under 20 Years.	1891. Over 25 Years.	1911. Under 20 Years.	1911. Over 25 Years.	Total Number of Males in 1911 as per cent. of Total Number in 1891.
Millers	114	426	80	544	198
Brewers	56	500	89	678	110
Tobacco	134	661	85	730	107
Bakers	110	388	95	459	111
Milk sellers	120	315	89	396	122
Butchers	101	372	95	427	108
Grocers	142	351	120	449	109
Publicans	85	918	83	985	107
Lodging and coffee houses	Not known		Not known		—
Ironmongers	135	386	126	460	113
Coal merchants	85	702	101	886	94
General shopkeepers	132	586	115	617	116
Costers	117	582	169	668	159
Bankers, merchants, clerks	104	329	104	347	118
Cabmen and motors	46	469	33	994	110
Carmen	110	351	139	561	150
Railway service (incl. porters)	75	421	73	479	140
Railway labour and navvies	57	830	44	1,057	181
Gardeners	80	766	72	1,066	84
Country labour	114	458	77	810	84
Seamen	80	476	54	526	77
Bargemen	88	586	71	807	77
Dock service	45	1,260	71	2,280	98
„ labour	50	760	35	1,280	134
Coal porters	64	505	53	933	110
Gas works	33	587	53	1,026	138
Warehouse and messengers	509	348	622	347	91
General labour	89	551	64	900	52
Factory labour	187	381	233	352	29
Artisans, etc., undefined	137	503	83	1,045	55
Civil service	145	443	121	608	176
Water and drains	72	963	81	1,746	192
Police	19	514	—	440	117
Army and Navy	65	163	57	186	109
Law	92	475	107	597	92
Medicine	59	694	73	951	108
Art and amusement	63	440	73	638	162
Literature and science	35	623	69	786	163
Education	77	606	46	653	118
Religion	44	156	39	223	100
Domestic service	104	266	78	315	149
Extra service	97	563	108	833	133

INDEX

NOTE.—It was not considered necessary in the following Index to cite all the references to the individual boroughs comprised in the Survey, or to all the various industries and occupations mentioned.

Information regarding particular boroughs should be sought by reference to the entries under "boroughs," and indirectly by reference to the subject headings.

Information about the growth or decline of the various industries and occupations will be found on pp. 410–29; about wages and earnings on pp. 132–8, and about unemployment on p. 356.

ACTON. *See* Boroughs, and note above
Age distribution of population, 9, 64–5, 80
  effect on death-rates, 202–3, 220
  on over-crowding, 152–3
  of occupied persons, 316–7, 327–34, 414–21, 428–9
Aliens, 68–70, 82–3, 155
Amenities, Public, 270–90
  State aided, 102–4
Amusements, 15, 18, 53, 290–8
  Cost of, 100
Area:
  of County of London, 7, 62
  of Greater London, 7, 60, 62
  of New Survey, 7, 59, 60
  of individual boroughs, 74–5
Art Galleries, 290
Atmospheric pollution, 47, 300–4
"Average family," The, 317

BARKING. *See* Boroughs, and note above
Baths:
  Private, 303
Baths:
  Swimming, 295–6
Battersea. *See* Boroughs, and note above
Beer:
  Consumption of, 18, 95–6, 109
  Price of, 95
Begging and Sleeping out, 395–6, 402. *See also* Vagrancy
Bermondsey. *See* Boroughs, and note above
Bethnal Green. *See* Boroughs, and note above
Betting and Gambling, 297, 395, 402
Birth, Notification of, 208, 222–3
Birthplaces of population, 9, 67–70, 81–3
Birth-rate, 10, 66–7, 202–3
Blind, The, 378
Boot and Shoe Trade, 20, 126–7, 133–8, 356, 410–29
Booth, Charles. His Survey of London Life and Labour, 2–4
  His description of his classification of the Population, 404–6, also *passim*

Boroughs of the Survey, 59, *Frontispiece*
Details relating to the various:
Area, 74–5
Birthplaces, 83
Density of population, 76–7
Libraries, 312–13
Overcrowding, 164–7
Parks and Open Spaces, 309–10
Pauperism, 373
Population, 74–5
Rents, 147
Sex Distribution, 78–9
Unemployment, 357
Boroughs, extra-Metropolitan (or outer), sense in which term is used, 59 *n.*
Borough Councils, Establishment of, 346
Borstal, 36, 398
Bowley, Professor:
Inquiries into Poverty, 17
Bread prices, 86, 92–3, 106
Broadcasting, 297–8
Bronchitis, 217, 234
Building Trades:
Earnings in the, 20, 126–7, 132–41
Employment in the, 11, 12, 117, 120, 156, 321, 325, 342–4, 347–8, 350, 354–6, 358, 410–29
Burt, Professor Cyril, 34–5

Camberwell. *See* Boroughs, and note, p. 431
Cancer, 219, 234
Care Committees, 213
Carnegie Fund Trustees, 288, 289
Casual Labour, 31–3, 122
Casual Labour at the Docks, Mess, 125
Casual Wards, 23–4, 368–70, 386
Central (Unemployed) Body, 345, 347–9
Charity Organisation Society, 2, 341
The rôle of private, 379–80
Chelsea. *See* Boroughs, and note, p. 431
Child Welfare, 209–13, 378
Children Act, *1908*, 208, 222–3, 392
Cinemas, 53, 100, 290–5
Classification, Charles Booth's, 2, 404–6
Cleansing Schemes, 211
Clinics, 210
Clothing prices, 16, 87–90, 108
Common lodging-houses, 23–4, 207, 408
Controlled Rents, 144–5. *See also* Decontrolled Rents
Cost of Living, 15–18, 84–110, 139
Index of, 91, 105–6
"Country Born" Population, 9, 68–70
County of London, 58
Area, 7, 58, 62, 75
Population, 6, 58, 62, 75
Courts of Summary Jurisdiction, 389–91
Cricket, 280–4
Crime and Crimes, 34–5, 389–403
against property, 392–4
of Violence, 391–2
Minor (non-indictable offences), 395, 401–2
Sexual, 394–5
Effect on, of cycling, 398
of education, 397
of improved economic conditions, 397–8
Cruelty to Children, 392, 401
Cycling, 189, 197, 296, 314, 398

Dagenham, 63
Dancing, 279, 296
Datum period, 12
Day Continuation Schools, 255

Death-rate, 10, 48, 66
Decline in the, from various causes, 200–4, 214–20
Decontrolled Rents, 149–50
Deficiency, Mental, 25–8, 209, 254, 407–8
Deptford. *See* Boroughs, and note, p. 431
Destitution, Legal Definition of, 362
Diarrhœa, 218, 221, 238–9
Digestive diseases, 218, 238–9
Diphtheria, 228
Dirt-track racing, 297
"Dis-amenities," 45–7, 270–1, 298–304
Distress Committees, 347
Dock labour, 32–3, 342, 348, 351
Domestic Service, 12, 319, 324
"Drage Return," 378
Drink, 15, 18, 36, 94–6, 102
Drunkenness, Decrease of, 218, 222, 395, 397

Earnings, 19–23, 124–31
Course of, in certain industries, 127, 138
Real, Rise of, since *1886*, 130
East Ham. *See* Boroughs, and note, p. 431
Education (*see also* Schools), 50–2, 245–69
Act, *1870*, 49–50, 206, 222, 245–6
Continued, 52, 254–61
Elementary, Cost of, 102–3
Effect of, on crime, 397
on public health, 49, 222–5, 227
Edwards, Passmore, 288
Employment Exchanges, 348–9
Engineering and Metal Trades:
Earnings in the, 120, 126–7, 132–8, 142
Employment in the, 11, 12, 325, 329–36, 342–4, 350, 352, 354–6, 358, 410–29
English Sanitary Institutions (Simon), 201, 205
Entertainments Tax, 100
Epidemic Diseases, 205, 215–16, 238–9
Evening Institutes, 255

Fares on train, tram and omnibus, 97–9, 109–10, 183–5, 194, 196
Fares, Workmen's, 99, 183–5
Finsbury. *See* Boroughs, and note, p. 431
Fog, 301
Food Prices, Index of, 86, 105, 106
Food, Cost of, 16, 85–6, 91–3, 105–7
Football, 280–4, 297
Foreign-born Population, 67–70, 83
Fuel and Light Prices, Index of, 16, 86, 105–8
Fulham. *See* Boroughs, and note, p. 431

Gambling, 297, 395
Games, Facilities for, 278–86
Gardens, Public. *See* Open Spaces
Gramophones, 298
Greater London:
Area, 7, 60, 62
Population, 7, 62
Great War. *See* War
Greenwich. *See* Boroughs, and note, p. 431
Greyhound Racing, 297
Grime, 47, 300–4

Hackney. *See* Boroughs, and note, p. 431
Hammersmith. *See* Boroughs, and note, p. 431
Hampstead. *See* Boroughs, and note, p. 431
Health, 200–44
Insurance. *See* Insurance
Hockey, 280–4

Holborn. *See* Boroughs, and note, p. 431
Hollesley Bay Colony, 348–9
Homeless Poor, The, 23–4, 369
Hornsey. *See* Boroughs, and note, p. 431
Hospitals, 205, 207, 213, 366–7
Hours of Labour, 19, 21, 116–18
  Index of, 117
  Table, 134–5
Housing, 39–42, 143–70
  Building and Demolition since *1920*, 159–60
Housing and Transport, Interdependence of, 39, 190, 193
  Legislation, 206–7

Industrial Classification:
  Charles Booth's, 320, 330–3
  The Census, 318, 320, 332–3
  Unemployment Insurance, 324, 334
Industrial Schools, 254, 398
Industries. *See* Occupations, also note, p. 431
Infant Mortality, 49, 220–5, 234, 237, 242
Infant Welfare Centres, 210. *See also* Maternity
Influenza, 202, 205, 216, 234
Influx of Population, 67–70, 203
Inner Ring of Survey Area:
  Boroughs comprised in, 170
  Open Spaces in, 274, 276, 305–7
  Overcrowding in, 158
Insurance:
  Contributions, 16, 128–9
  Health, 49, 103, 128, 208, 378
  Unemployment. *See* Unemployment
Islington. *See* Boroughs, and note, p. 431

Kensington. *See* Boroughs, and note, p. 431

Labour Bureaux, 345–6
  Exchanges, 349
Lambeth. *See* Boroughs, and note, p. 431
Lawn Tennis, 280–4
Leisure, Increase of, 19, 56, 117–18, 130–1, 294
  Effect of, on mobility, 44, 56, 190
Lewisham. *See* Boroughs, and note, p. 431
Leytonstone. *See* Boroughs, and note, p. 431
Libraries, Public, 52–3, 286–90, 311–13
Light and Fuel Prices, Index of, 87
Local Government Act, *1929*, 380
London, County of, 58
  Area, 7, 58, 62, 75
  Population, 6, 58, 62, 75
London Government Act, 346
London Playing Fields Association, 274
London School Board, 246, 264–5
London Squares, Royal Commission on, 277

Mansion House Funds, 2, 341, 345, 347
Married Women and Industry, 316–17
Maternity Services (*see also* Infant Welfare), 49, 207–9, 378
Mental Deficiency, 25–8, 209, 254, 407–8
Metal and Engineering Trades. *See* Engineering
Metropolitan Asylums Board, 216, 367–9
  Common Poor Fund, 347, 374–5
  Public Gardens Association, 273
Middle Ring of Survey Area:
  Boroughs comprised in, 170
  Open Spaces in, 274, 305–7
  Overcrowding in, 158

Midwives, Legislation affecting, 207
Milk, 107, 209, 218
Mobility (*see also* Leisure), 171–99
"Mond Scale," The, 375
Money, Purchasing power of, 14 (*see also* Cost of Living)
Mothers, Schools for, 210
Motor-cars, 36, 189, 285, 392–3
Motoring Offences, 395
Museums, 290
Music Halls, 53, 290–5
Music, Mechanical, 279, 298

National Health Insurance, 16. *See also* Insurance
National Playing Fields Association, 284
National Sunday League, 279
Necessaries, Cost of, 85, 90–91
Nervous Diseases, 217–18, 238–9
Newspapers, Cost of, 99
New Survey:
  Area, 7, 59–62
  Inner, Middle and Outer Rings defined, 170
  Occasion of, 4
  Population, 7, 62–3
  Scope, 53–7
Noise, 300
Nurses, 213, 224, 366

Occupation, Place of, 7, 323, 338
Occupations and Industries, 315–40, 410–29
  distinction between, 322
Occupations, Changes *1891–1911*, 319–22, 410–21
  1911–21, 322–4, 422–3
  1923–29, 324–6, 424–7
  Unemployment in the various, 356
  Wages in the various, 132–7
Occupied population, The:
  Age distribution of, 316–18, 321, 414–21, 428–9
  Localisation of, 315–16
Occupied population, The:
  Numbers of, 338–40
  Sex distribution of, 315–18, 324–40, 410–27
Old Age Pensions, 103, 208, 378
Omnibuses, 42–4, 171–99
  Comfort, 182–3
  Effect of Motor Traction, 180–1
  Extensions, 179–81, 194
  Fares, 98, 194
  Frequency, 194
  Seating accommodation, 194
  Speed, 194
  Unifications, 179
Open Spaces, 45–47, 271–86, 305–10
Orphans' Pensions, 103, 378
Outer Boroughs. *See* Boroughs.
  Eastern Ring of, 6, 58
Outer Ring of Survey Area:
  Boroughs comprised in, 170
  Open Spaces in, 274–5, 305–7
  Overcrowding in, 158
Overcrowding, 34, 39–42, 150–60, 164–8
  Standards of, 150–4

Paddington. *See* Boroughs, and note, p. 431
Parks. *See* Open Spaces
Pauperism. *See* Poor Law
Penge. *See* Boroughs, and note, p. 431, also p. 59
Pensions, Old Age, 103, 208, 378
  Orphans', 103, 378
  Widows', 103, 378
Phthisis, 217, 234
Piece-work, Influence of, on Wages, 119–20
Playing fields, Provision of, 279–86
Pneumonia, 217, 234
Police Courts, 389–90
Polytechnics, 255
Poor Law, 28–31, 103, 346, 361–88
  Act of *1601*, 362

Poor Law:
Casual Wards, 23–4, 367–70, 386
Commission of *1834*, 364, 374
Commissioners' Report, *1839*, 201
"deterrence," 379
Domiciliary Relief, 371–81, 384–5
Hospitals, 366–7
Institutional Relief, 365–83
Royal Commission of *1905–9*, 363, 379
Scales of Relief, 374–5
Schools, 367
Poplar. *See* Boroughs, and note, p. 431
Population:
Age distribution, 9, 65, 80
Birthplaces, 67–70, 81
County of London, 6, 62
Country born, 67–9
Decentralisation of, 190
Density, 8, 63–4, 76–7
Foreign born, 67–70
Greater London, 7, 62
Influx of, 9, 67–70, 203
Map, *facing* p. 70
Proportion occupied, 315, 327
Sex distribution, 9, 64, 78–9
Survey Area, 7, 62
Port of London Authority, 33
Poverty line, The, 15, 17, 22, 31, 122, 406
Prices, Movements of, 84–110
Printing Trades:
Earnings in the, 20, 126–7, 133–141
Employment in the, 342–4, 352, 354–6, 358, 359, 410–29
Probation, 36, 399
Property, Crimes against, 392–4
Prostitution, 395, 402
Public Assistance. *See* Poor Relief
Railways, Main Line and Underground, 42–4, 171–98
Comfort, 182
Electrification, 173–7
Extensions of, 171–7, 194
Fares, 98–9, 110, 194
Frequency, 181
Position of Termini, 171–2
Speed, 194
Unification, 176
Workmen's Fares, 183–5
Rates, 87, 145, 147, 148, 150 and Public Libraries, 289
Real Earnings, 21, 130
Real Wages, 19, 122–3, 139
Recreation, 34, 270–98
Reformatories, 254
Rent, 42, 87, 144–50, 161
Movements in the various boroughs, *1880–1900*, 147
Rent Restriction (*see also* "Controlled" and Decontrolled Rents), 144–5
Effect on Index of Rentals, 150 on Mobility, 190
Permitted Increases, 161
Residence, Place of, 7, 190, 323, 338
Respiratory Diseases, 216–17, 238–9
River Travel, 188
Roller-Skating, 296
Rooms, Size of, 153

St. Marylebone. *See* Boroughs, and note, p. 431.
St. Pancras. *See* Boroughs, and note, p. 431
Sample House Enquiry, 7
"Sanitary Idea" (Chadwick's), 201, 213, 215
Scholarships, 254–60
School Attendance, 246–9, 262
Compulsion, 252–3, 264, 268
Classes, Size of, 251–2, 263–4
Life, Duration of Elementary, 250, 263
Medical Service, 212–13

Schools:
Central, 255
Day Continuation, 255
Elementary, 246–53, 262–9
Industrial, 254, 398
Nursery, 208
Poor Law, 367
Secondary, 254
Special, 208–9, 253
Trade, 255
Sex distribution, 9, 64, 78–9
of Occupied Persons, 315–18, 324–40, 410–27
Sexual crimes, 394–6, 400
Shipbuilding Trade, Employment in the, 342–4, 350, 352, 354–6, 358–60
Skilled Labour:
Classification and Wages of, *See* Unskilled Labour
Slum Clearance, 206–7
Smoke Abatement, 303
Social Services, 22–3, 49, 102–4, 202, 209, 214, 378
Southwark. *See* Boroughs, and note, p. 431
Special Schools, 208–9, 253
Squares, London, 277
Stepney. *See* Boroughs, and note, p. 431
Stoke Newington. *See* Boroughs, and note, p. 431
Street Survey, 7
Sub-letting, Influence of on Rents, 149
Subnormal Element in London Population, 23–38
Survey Area. *See* New Survey
Sweating. *See* Trade Boards

Taxi-cabs, 189
Tenements, 154–5
Thames Steamers, 188
Theatres, 53, 100, 290–5
Tobacco, 15, 18, 96–7
Tottenham. *See* Boroughs, and note, p. 431
Trade Boards, 38, 115
Cycle, 343–4
Schools, 255
Union Contributions, 101
Trades. *See* Occupations
Traffic Congestion and Danger, 45, 181–2, 197, 298–300, 314
Statistics, 186, 194–9
Tramways, 42–4, 171–99
Comfort, 182–3
Electrification, 177
Extensions, 177–9, 194
Fares, 97, 109, 185, 194
Frequency, 182–3
Seating Accommodation, 194
Speed, 194
Unification, 177
Transport, 171–99
and Housing, Interdependence of, 39, 190, 193
Cost, 97–9, 109–10, 183–5, 194
Travel (*see also* Mobility, Trains, Trams and Omnibuses), 15, 18, 39, 42–5, 171–99
Effects of Increased, 189–93
Growth of, 185–9, 195,
Truancy, 252
Tuberculosis, 202, 208, 212, 223, 378

Underemployment, 32–3, 342
Unemployed Workmen Act, *1905*, 347–9
Unemployment, 21, 31–3, 129, 341–60
and Poor Law Relief, 371, 374, 376, 379
Grants Committee, 349
Insurance, 21, 103, 348–50, 378
Statistics of Industry, 11, 16, 318–9, 324–6, 336, 424–7
University Extension Lectures, 256
Settlements, 2
Unskilled Labour, 19, 38
Classification of, 140–1
Rise in Wages of, 19, 115, 118, 120–2, 123

Vaccination, 205, 215
Vagrancy (*see also* Begging, Casual Wards, Homeless Poor), 36, 367–70
Venereal Disease, 202, 209, 218, 378
Vermin in School Children, 211, 392
Violence, Crimes of, 391, 400
Vocational Training, 261

Wages, 19–23, 111–42
  Hourly Rates of Money, Index, 115
  Hourly Rates of Money, Table, 132–3
  Weekly, Time Rates of Real, Index, 123
  Weekly Time Rates of Money, Index, 118
  Weekly Time Rates of Money, Table, 136–7
  Women's, 115–6
Walthamstow. *See* Boroughs, and note, p. 431
Wandsworth. *See* Boroughs, and note, p. 431
War, the Great:
  Effect on Social Conditions, 5, 10, 29, 296
  on Crime, 396
War, the Great:
  Effect on Outdoor Relief, 364, 371–2
  on Overcrowding, 157
  on Transport, 180, 186
  on Wages, 121
Wash-houses, 303
West Ham. *See* Boroughs, and note, p. 431
Westminster. *See* Boroughs, and note, p. 431
Wheatley, Dr. James, 221–5
Widows' Pensions, 103, 378
Willesden. *See* Boroughs, and note, p. 431
Wireless, 297–8
Women:
  in Industry, 11, 315–6, 319–20, 324–5, 327–30, 410–27
  Married, and Industry, 316–17
  Wages of, 115–6
Woolwich. *See* Boroughs, and note, p. 431
Workers' Educational Association, 256
Workplaces. *See* Occupation, place of

Zymotic Diseases, 201, 205, 215–16, 234

Printed in Great Britain by Butler & Tanner Ltd., Frome and London

Date Due			
May 13 '37	Chick		
Nov 15 '38			
One Week -	Oct. 1940		
" "	Sept. '42		
" "	Oct 44		
MAR 14 1951	Nov 4 '57		
Mar 19 '52			
Oct 27 '52			
Oct 21 '53			
Nov 3 '54			
Nov 7 '55			
JAN 8 1957			
MAY 12 '71			

WHEATON COLLEGE -- NORTON, MA 02766
WHEE HN398.L7 L6 v.1
The new survey of London life & labour.
29840
3 6307 00139228 8

29840

HN
398
L7
L6
v.1